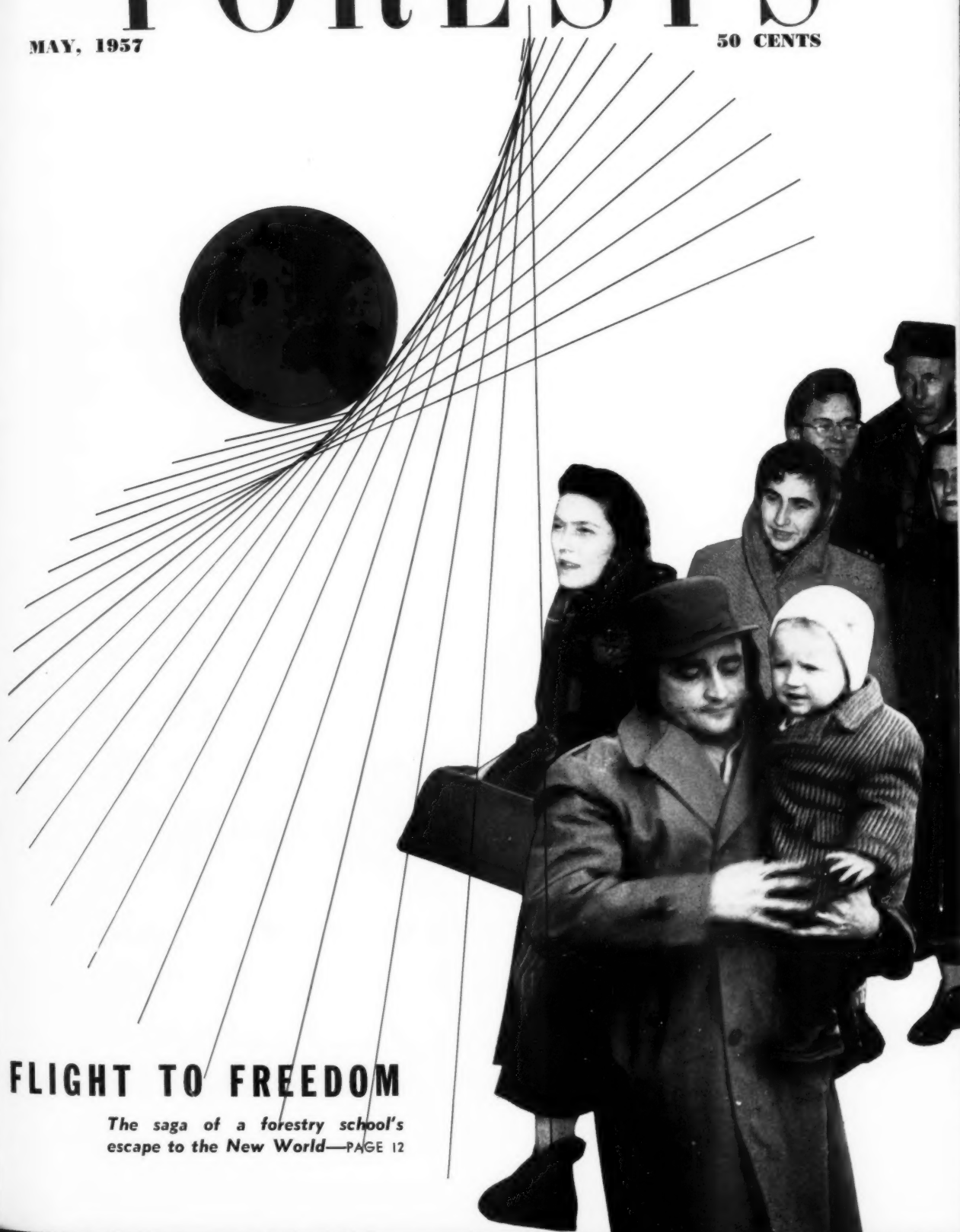


*American*

# FORESTS

MAY, 1957

50 CENTS



## FLIGHT TO FREEDOM

*The saga of a forestry school's  
escape to the New World—PAGE 12*

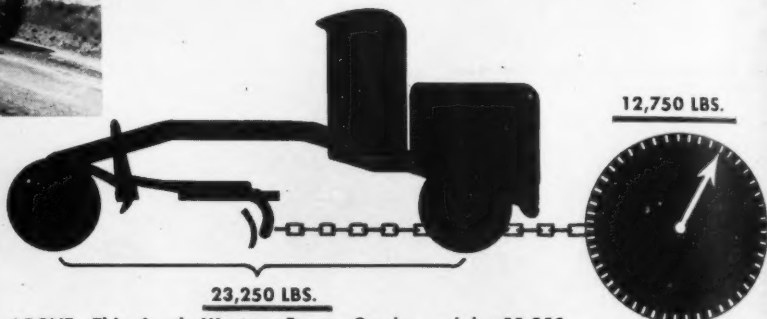
# Not "How Big?" But "How Good?"



The ability of any motor grader to do hard cutting, and move big blade loads of material in the lower gears, where heavy work is done, depends entirely upon the amount of weight carried on *driving wheels*. Total weight has nothing to do with it.

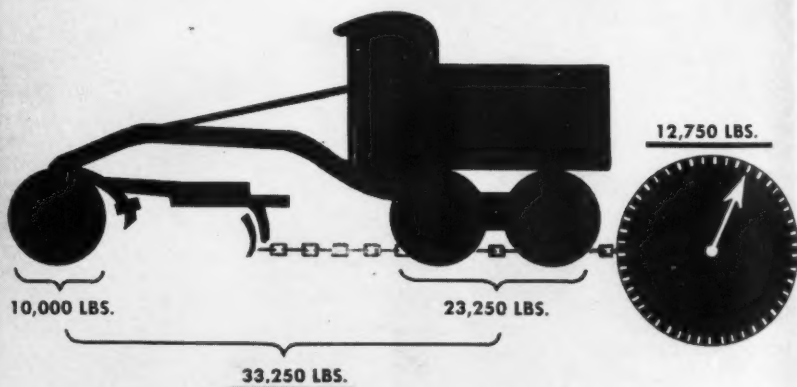
**Most for Your Money**  
From every standpoint . . . first cost, operating cost and upkeep . . . the A-W Power Grader gives you more for your money . . . moves 30 percent more material than an ordinary grader of equal weight and horsepower; and as much material as heavier, more expensive graders . . . as explained in the diagrams at the right.

## SIZE IS NOT THE MEASURE OF MOTOR GRADER PERFORMANCE



ABOVE: This Austin-Western Power Grader weighs 23,250 lbs.—all carried on driving wheels. Working in average dirt, it has a blade pull of 12,750 lbs.

BELOW: To obtain the same blade pull, an ordinary motor grader would have to carry 23,250 lbs. on its rear drivers; PLUS about 10,000 lbs. on its dead front end, for a total of 33,250 lbs.



*There's more to the story.* All-Wheel Steer makes the machine twice as maneuverable as graders with front steer only; while the Controlled Traction made possible by the teamwork of All-Wheel Drive and All-Wheel Steer moves more material . . . moves it farther . . . moves it faster. Your nearby Austin-Western distributor will be glad to tell you the whole story of "The Power Graders That Have Everything."

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# American FORESTS

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## The AFA

The American Forestry Association, publishers of *American Forests*, is a national organization—independent and non-political in character—for the advancement of intelligent management and use of forests and related resources of soil, water, wildlife and outdoor recreation. Its purpose is to create an enlightened public appreciation of these resources and the part they play in the social and economic life of the nation. Created in 1875, it is the oldest national forest conservation organization in America.

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# Forest Forum

## Setting the Record Straight

DEAR MR. JOHNSTON:

My attention has been called to the action by your Board of Directors in its consideration of legislation to table S. 1136 for the reason that "funds should be directly appropriated to the agencies concerned."

While I do not seek the endorsement of your association for this bill, I am always delighted to have the comments of any person or group on legislation I am sponsoring. As presently drawn, the bill follows the accepted practice of authorizing funds for the Secretary of Agriculture to expend on the national forests and funds for the Secretary of the Interior to set up a revolving fund for the Indian forests. To my certain knowledge, this is the way the present law for the Forest Service is and has been for many years. In addition, it is the way every authorization is drawn.

Similarly, the annual budget presented to the Congress contains the request for funds in fulfillment of the authorization, and this is found in the department's budget in a special account for the agency carrying out the program. In this case it would be the Forest Service in the Department of Agriculture and the Bureau of Indian Affairs in the Department of the Interior.

I am at a complete loss to understand the imperfection in draftsmanship on this point, since both the attorneys in the Department of Agriculture, persons in the Forest Service and in the lumber industry had drafts of the bill before it was introduced last year. While I received many valuable comments, none suggested that the authorization was not directly to the agencies concerned.

I have detected one error in the bill. In section 2 (k) after the words "timber access road" the words "authorized in Sec. 1 above" should be inserted. The purpose of this correction is to restrict public hearings to roads constructed with appropriated funds as is presently the case.

There are many substantive provisions in the bill which are designed to implement better forest management and I would be delighted to have your further comments. In particular, I would appreciate your particular comments on the authorization language. Since your office is here in Washington, I hope you will feel free to call at my office should you wish to discuss the matter.

I appreciate that, for the purposes of saving space, you only identified me as the sponsor of the bill. However, Senators Magnuson, Jackson, Murray, Mansfield, and Neuberger are co-sponsors with an equal interest.

I am happy to note that you endorse two other bills with which I am associated: S. 469 and S. 846, and that you are supporting the Forest Service budget. I hope that you will consider giving attention to

the programs and budgets for the Bureau of Land Management, Indian Affairs, and Park Service for they, too, carry out smaller but vital forestry and recreation programs.

It would be deeply appreciated by me if you would forward copies of this letter and the bill to your board members, and publish this letter in your magazine. For the information of your members my remarks on the access road bill are in the Congressional Record for February 7, 1957.

Wayne Morse  
U. S. Senator,  
Oregon

## The President's Reply

DEAR SENATOR MORSE:

We are pleased to receive your clarifying letter of March 22 regarding S. 1136—Access Roads. It is reassuring to know that this is in accordance with the present law and has been so for many years.

In our board discussion of this important proposal, we misinterpreted the reference to the Federal Highway Act in the opening paragraph of S. 1136. Some of our members thought this might mean that the Bureau of Public Roads might have something to say about construction and if so, then conceivably the construction might be to a higher standard and hence more expensive than actually required for timber sale and national forest administrative purposes. Apparently this is not so.

We are concerned over the large sums of money proposed for this and other federal activities. While we do not know what the minimum requirements, consistent with sound construction and efficient management, may be, we do hope that you and your colleagues will be ever mindful of the necessity for securing all possible economies in government operations.

Your letter and this reply will appear in the May issue of AMERICAN FORESTS. Unfortunately, the April issue had gone to press before we received your letter.

Don P. Johnston  
President

The American Forestry Association

DEAR MR. JOHNSTON:

I am delighted to have your letter of March 28 relative to S. 1136—Timber access roads.

It is good to know that you and your board are interested in the complexion of the budget. The bill proposes authorizing \$32 million for 1958, \$36 million for 1959, \$42 million in 1960 and \$50 million for the nine years thereafter. Goals would be set and there would be ample opportunity for the Public Works Committee to review this matter every two years and for the Appropriations Committee to also consider, as it does in every item whether the full authorization shall be appropriated. I think the record will show that even in such vital

programs as those set forth in the Anderson-Mansfield reforestation and revegetation act, the modest goals of the authorization have not been met.

The timber access roads contemplated by this bill are an investment that will return every cent appropriated to the Treasury. I am convinced that the continuation of the present \$27 million authorization is a waste rather than a real economy.

I am delighted we could clear up the question you had on the language and to assure you that I shall be glad to hear from you further on matters affecting conservation.

Wayne Morse  
U. S. Senator,  
Oregon

## Not For New Bureau

EDITOR:

In your report of my remarks on the wilderness bill at the March 7 meeting of the Society of American Foresters (AMERICAN FORESTS, April 1957, page 7), you say through some curious inadvertence that I favored "a new Bureau of Wilderness Preservation" in place of "what we now have." The exact opposite is the truth, and it is, in fact, an essential feature of the wilderness bill that, as expressed in the title, it will "provide for the protection and administration of the areas within this system by existing federal agencies."

Howard Zahniser  
Executive Secretary and Editor  
The Wilderness Society  
2144 P Street, N.W., Wash. D. C.

(Editor's Note — We understood Mr. Zahniser to state that he favored such a Bureau as did our Chief Forester. However, we must admit the possibility of error as his talk was reported from notes. We are glad to publish his letter of correction.)

## Where Do the Figures Come From?

EDITOR:

We are both very interested in this disposal of Indian lands. Personally, I see nothing wrong with the original law; but I would like to ask one question. How did these management specialists arrive at the fact that the Klamath Indian lands are worth some 80 million dollars or more? I am anxious to obtain a detailed copy of the inventory and timber appraisal if possible, or at least a copy of the summary sheet.

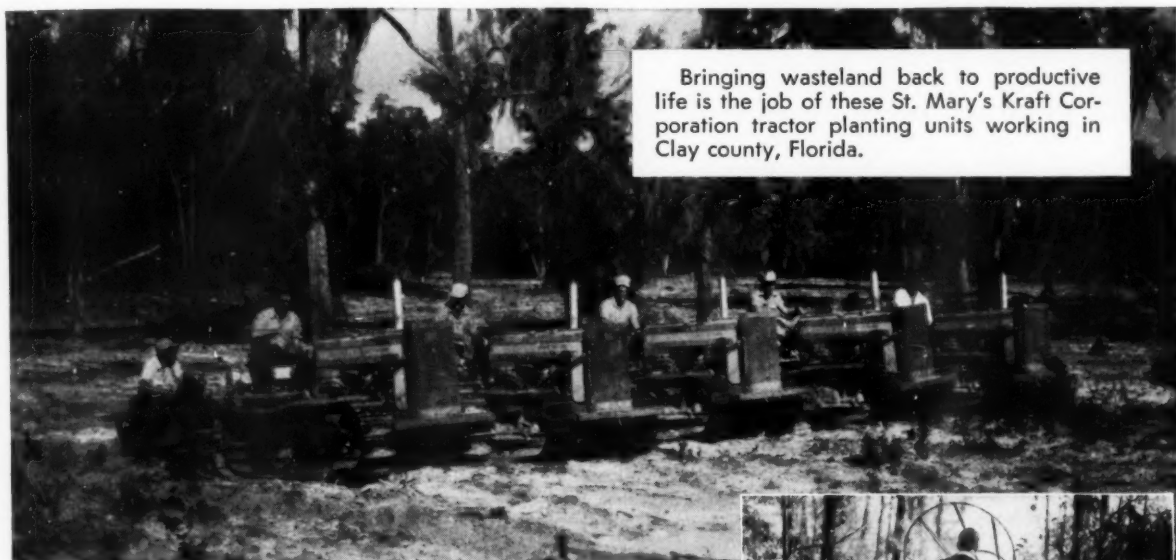
William P. Branson  
Box 135  
Lowell, Oregon

(Editor's Note — This is a question that has been raised by several readers of AMERICAN FORESTS. Others have asked how the specialists arrived at a figure of \$40,000 for every Indian in the tribe. For the moment, it appears that Mr. Branson and others who have raised these questions will  
(Turn to page 72)



*Whatever Your Job . . .*

## **A JOHN DEERE CRAWLER** *Will Cut Your Money Outlay*



Bringing wasteland back to productive life is the job of these St. Mary's Kraft Corporation tractor planting units working in Clay county, Florida.

**T**REE harvesting or tree planting—it's all in the day's work for John Deere Crawler Tractors. Picture above shows five of the fleet of thirteen John Deere Tractors owned by the St. Mary's Kraft Corporation, Glen St. Mary, Florida.

The tractors are planting slash pine on a land reclamation project in Clay County, Florida. The company is now using seven John Deere "420" Crawler Tractors with 3-point hitch and six John Deere "420" Utility wheel-type tractors with special, heavy-duty tree planters that mount on the tractor's 3-point hitch.

To give you an idea of the remarkable work production of these outfits, each unit is planting at the rate of approximately 10,000 seedlings a day, 700 seedlings to the acre. The trees are being planted for pulpwood. Ordinarily it would take 20 to 25 years before cropping, but in this type of prepared land, harvesting is expected to start in 12 to 15 years. Approximately 3,000 acres of waste scrub land was reclaimed by the company in 1956. The project is under the supervision of F. B. Coleman and Jeff Hargreaves, foresters.



Today it's no trick to make a fire break with a special fire-line plow powered by the compact, powerful, and easy-to-manuever John Deere Crawler Tractor.



### **SEND FOR FREE LITERATURE**

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Please send me your illustrated booklet on John Deere Crawler Tractors and Working Equipment. Include name of nearest industrial dealer.

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This 2-man St. Mary's crawler unit plants up to 10,000 slash pine seedlings per day. At ends of the field, tractor operator raises planter and setter by hydraulic power to make the turn.

## READING ABOUT

# CONSERVATION

By E. MEYER-HANSEN



Mr. E. Meyer-Hansen

**THE USE OF COMMERCIAL FERTILIZERS — PARTICULARLY IN FORESTRY**—By Dr. Herman Mayer-Krapell. Originally published in German by Ruhr-Stickstoff. Translated into English by The Nitrogen Division of Allied Chemical and Dye Corporation.

**FERTILIZING FOREST LANDS:** By Dr. Takeo Shibamoto, Professor of Forestry, Tokyo University. Originally published in Japanese by Forest and Estate Mutual Foundation, Tokyo, Japan. Translated into English by The Nitrogen Division of Allied Chemical and Dye Corporation.

THE objectives of these two publications are to review the progress in research on nutrition of forest trees and to stimulate interest in forest fertilization, a subject that until recently has attracted little attention.

While the data are assembled from many parts of the world and may not be directly applicable to conditions in the United States, we may be reminded that our trees grow under the same sun, thrive from the same kind of rainfall and respond in similar manner to nutrition, care and protection as trees elsewhere; and there is much to be learned from the two books. We are, therefore, greatly indebted to the Nitrogen Division for having made these two important publications available in English and for distributing them so widely.

Necessity is said to be the mother of all inventions. If that still holds true than we may expect a lot of new developments in the field of forestry fertilization, for unless we succeed in increasing volume growth of timber per acre and reducing the time required to produce this volume, we shall, before so very long, have to

do without many of the convenient household items made of wood and wood products that we are so accustomed to enjoying. The reason is simply that the need of our growing population is making itself felt with greater demands than our forests can supply. Unless the rate of growth is stepped up there will not be enough to go around.

Cooperating with the compelling demands of the increasing population to make the appearance of the two booklets exceedingly timely are the needs of owners of forest lands for larger income. Further the many industrial enterprises drawing on the forest for raw material as well as those enterprises depending indirectly on the forest will welcome new ideas and methods that may help to safeguard the huge investment they have in manufacturing facilities. Added to these groups is now the fertilizer industry. After having gone through a number of years of expansion in manufacturing facilities, the fertilizer industry now finds itself with surplus capacity—a capacity which it is anxious to put to work. Further, it is no doubt equally eager to invest funds to develop talent to capture new markets. Surely the 624 million acres of low-producing forest land in the United States offer a challenging opportunity for rewarding pioneer work. One hundred and seventy million American consumers are waiting.

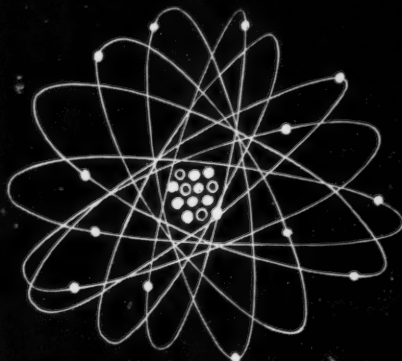
For the man who grows trees, the data in the booklets are very encouraging for they substantiate rather well the hope that the time required to grow a timber crop by fertilization can be reduced some 20% to 30% and the volume growth at the same time increased 40% to 60% when properly managed. Therefore, the time may not be far off when trees are planted, fertilized, cared for and protected much in the same order as other cash crops.

Dr. Mayer-Krapell's booklet is a collection of research data obtained from many parts of the world and supplemented by excellent experiments of his own. Its ten chapters are arranged in a natural manner from Fertilizing Seed Beds and Plant and Tree Nurseries to Fertilizing Plantations, Special Purpose Trees, Forest Pastures and Game Browsing Areas. It will be a great help to those wishing to use fertilizer—particularly nitrogen—in the forest and especially to those who plan further research on the subject.

It is quite possible that many growers of trees will agree with Dr. Shibamoto and even feel that he is expressing their thoughts when he observes that "By following in the footsteps of the kind of management hitherto customary, the average growth will undoubtedly remain low." And two paragraphs later continues, "The application of fertilizer is indispensable, therefore, for increasing our forest resources. Nonetheless, there are even today some leading figures in forestry who feel that it is not yet economically sound to apply fertilizers in forests, and that the shortages in the supply of timber can be remedied merely by proper forest administration."

Dr. Shibamoto's views are substantiated in the report of his studies presented in six chapters covering the (1) Necessity for Fertilizing Forest Lands, (2) Development and Productivity of Forest Soil, (3) Pur-

(Turn to page 72)



$$E=mc^2$$

## Atomic power in Caesar's day?

### *Certainly!*

It was there, in the ground, in the air and water. It always had been. There are no more "raw materials" today than there were when Rome ruled the world.

The only thing new is knowledge . . . knowledge of how to get at and rearrange raw materials. Every invention of modern times was "available" to Rameses, Caesar, Charlemagne.

In this sense, then, we have available *today* in existing raw materials the inventions that can make our lives longer, happier, and inconceivably easier. We need only *knowledge* to bring them into reality.

Could there possibly be a better argument for the strengthening of our *sources* of knowledge—our colleges and universities? Can we possibly deny that the welfare, progress—indeed the very *fate*—of our nation depends on the quality of knowledge generated and transmitted by these institutions of higher learning?

It is almost unbelievable that a society such as ours, which has profited so vastly from an accelerated accumulation of knowledge, should allow anything to threaten the wellsprings of our learning.

### *Yet this is the case*

The crisis that confronts our colleges today threatens to weaken seriously their ability to produce the kind of graduates who can assimilate and carry forward our rich heritage of learning.

The crisis is composed of several elements: a salary scale that is driving away from teaching the kind of mind *most qualified* to teach; overcrowded classrooms; and a mounting pressure for enrollment that will *double* by 1967.

In a very real sense our personal and national progress depends on our colleges. They *must* have our aid.

Help the colleges or universities of your choice. Help them plan for stronger faculties and expansion. The returns will be greater than you think.

If you want to know what the college crisis means to you, write for a free booklet to: HIGHER EDUCATION, Box 36, Times Square Station, New York 36, New York.



Sponsored as a public service, in cooperation with the Council for Financial Aid to Education, by



## THE AMERICAN FORESTRY ASSOCIATION

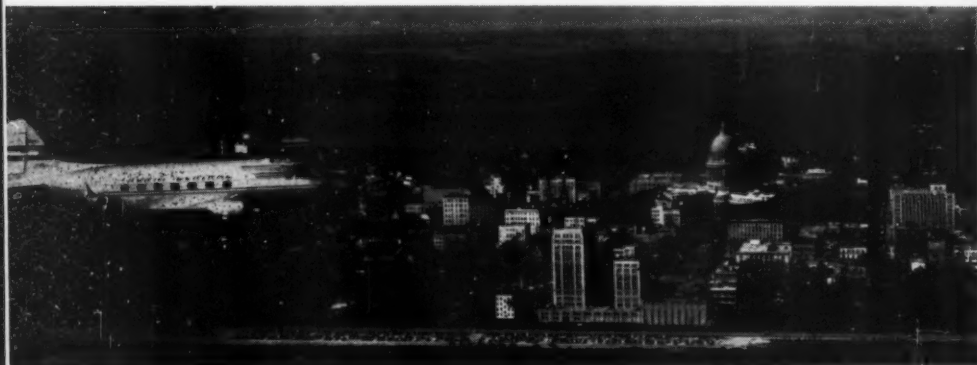
# WISCONSIN VACATIONLAND

SCIENCE and scenery will be two major inducements to attend AFA's annual meeting September 30-October 3 at Madison, Wisconsin. Theme of this year's annual get-together will be "Wood Products on Parade" and it will center around the famous Forest Products Laboratory of the Forest Service of the Department of Agriculture. Have you any idea how many wood products of one kind or another you use every day in your kitchen, around your home or on your farm. The number is going to amaze you. In addition to that AFA will point up the major research needs in forestry today and in doing this will provide a peek at what is certain to be a fabulous research future in wood.

Setting for this year's meeting will be one of the loveliest in the nation. Madison is a beautiful university city and prides itself on its warm welcome to visitors. More than that, Madison is one of the principle ornaments in a beautiful vacationland state. Wisconsin boasts a total of 8,676 lakes and AFA members will see some of them at the height of the fall color season. Madison itself

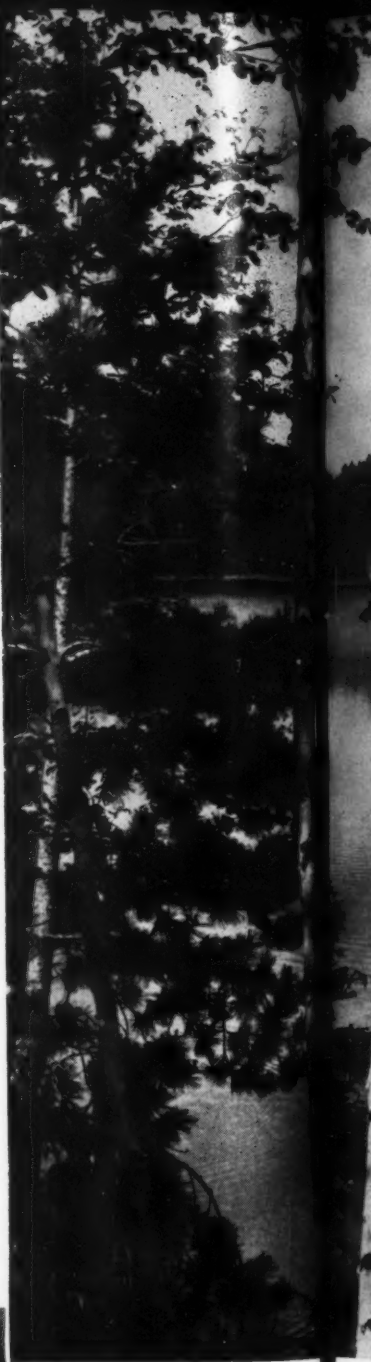
is a city literally squeezed by lakes. It starts with a narrow bar—an isthmus, seven or eight blocks wide between Lake Mendota on the northwest and Lake Monona on the southeast. There on a hill stands the magnificent capitol building in a green and flowered square, surrounded by the business district — stores and banks and theaters and hotels. Streets take off from there like spokes of a wheel. On the east and on the west, as the lake shores slope away, the city spreads out bulb-like—so that the whole effect is rather like a dumbbell in shape. At the east end of the isthmus, a narrow, grassy-bordered channel—the Yahara River—connects Lakes Mendota and Monona. Actually, from a walk around the capitol dome you can see five lakes—Mendota, Monona, Kegonsa, and a little beyond the city—Waubesa and Kegonsa.

Sound attractive? Well, it is. And in addition to the recreational outlets to be featured, this year's meeting program as headed up by General Chairman J. P. Aberg promises to be one of the most attractive in AFA history. Mr. Aberg, a promi



State Journal Staff Photo

This is what AFA visitors will see who fly into Madison this fall for our 82nd Annual Meeting. As you will note, the city is an isthmus squeezed between beautiful lakes



From capitol dome, visitors can count five different lakes







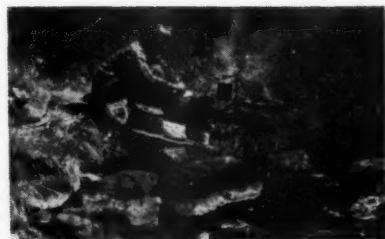
Photo by Wisconsin Conservation Dept.

**Miles Lake (above) is one of 8,676 lakes in scenic Wisconsin**

nent Wisconsin attorney, is also one of the top conservationists in the nation—a man who has said, "Sound conservation must have continued stability and years of planning." Naturally, a man with this long-range viewpoint is tremendously interested in research and the purpose of this year's meeting will be to show the public the magic of wood.

Wood magic is as broad as science itself. Not only does wood provide thousands of useful products but the tree from which it comes is also one

of the keys in preserving all our renewable resources of soil, water, wildlife and providing outdoor recreation. Some of the top wood research men in the country will review both past research progress and what we can expect in the future at the meeting. In addition to that, plans are being made for an extensive exhibit that will show wood products on parade. To do this effectively, a versatile setting is necessary and Wisconsin provides that setting due to the versatility of its



**Whether it be a lake or stream, fishing in Wisconsin is top grade**



**Roasting marshmallows at Eagle Light House, Peninsula State Park**



**Madison is a city of parks. This is the duck pond at Vilas Park Zoo**

recreational outlets and variety of different types of wood industries.

Preliminary plans call for forenoon formal programs on Monday and Tuesday, September 30 and October 1, followed by half-day tours through the Forest Products Laboratory, the University of Wisconsin and other nearby points of interest. Wednesday probably will be an all-day excursion to Wisconsin Dells, Crandall Plantation on Black Hawk Island, and the Devils Lake State Forest.

# Talking about Trees



Helen Parris, top woman personality of Atlanta's WAGA-TV, helped stimulate public interest in forestry

**T**IP to tree growers: If you want to get your story across to the public, enlist the aid of a pretty girl who also happens to be women's director for a chain of television stations.

Television executives in the Storer Broadcasting Company started worrying when their top woman personality, Helen Parris, of Atlanta, Georgia's WAGA, started telling her listeners about such subjects as "tree planting" and "stump removal." Or rather they worried until Mrs. Parris' rating climbed like never before.

It all started when Mrs. Parris and her lawyer husband, Bob, bought a rundown farm within commuting distance of Atlanta. After sprucing up a slightly battered farm house, the couple turned their attention to the land. It was in pretty sad shape too. Most of the acreage had been stripped of its timber. Erosion was bad.

Soon a major stump removal project was in full swing during which period Mrs. Parris learned to drive a tractor. It was about this time that southern television viewers started to get acquainted with the trials and

tribulations of rejuvenating a rundown farm. Such people as Billy Hine, assistant regional forester of the Forest Service, began putting in frequent appearances on the five-days-a-week show.

"I'm sure these appearances sparked public interest in Georgia's greatest natural resource, timber," Mrs. Parris comments. "I know they set off a bomb in me and I kept pestering all the forestry people in the Atlanta area for all the help I could get."

After setting out 20 acres of Les  
(Turn to page 52)

# Washington



# Lookout

By ALBERT G. HALL

A BUDGET REDUCTION AFFECTING THE CONSERVATION RESERVE PHASE OF THE SOIL BANK has been recommended by the President. The cut, amounting to \$254 million is the result of study of the budget and the fact that the conservation reserve is not being accepted as rapidly by farm owners as was anticipated when the program was inaugurated last year. Timing of payments, therefore, will be later in the calendar year than had been expected, thus shifting some of the payments and operating expenses into the next fiscal year.

EXPANSION OF COVERAGE OF THE CONSERVATION RESERVE is asked by the Maine delegation. Bills introduced by Senators Smith and Payne and Representatives Coffing and McIntire ask that the Soil Bank Act be amended to permit payments to owners of farm land of marginal character if planted to trees. For the most part these would be rocky soils more suitable for tree growth than for commercial agricultural crops—land not now eligible for inclusion in the conservation reserve. Estimated annual rental value of such land is about \$3 an acre. Under the proposal the landowners would receive in addition to the annual rental, the usual Soil Bank subsidy of 80 percent of the costs of establishing the plantings. Other proposed amendments affecting the conservation reserve are one by Representative Jones of Missouri to provide for greater utilization of the technical services and facilities of the state game and fish agencies, and one by Mrs. Knutson of Minnesota to permit grazing land to be included in the reserve.

THE HOUSE HAS APPROVED THE ENGLE BILL REQUIRING CONGRESSIONAL APPROVAL OF WITHDRAWALS of public lands for defense purposes when such withdrawals are in excess of 5000 acres for any one installation. Study by the House Committee on Interior and Insular Affairs, of which Representative Engle of California is chairman, revealed that the defense agencies control more than 30 million acres in the United States and Alaska, as compared with about 3 million acres in 1937. Pending applications would add another 10 million acres. For a period of 547 days prior to June 30, 1955, defense agencies acquired land at the rate of 5 acres a minute, 24 hours a day, according to the committee's report. On the basis of incomplete reports, it appears that the defense agencies now have as much as 3 million acres in excess of their needs.

ESTABLISHMENT OF NEW BOUNDARIES FOR THE EVERGLADES NATIONAL PARK is proposed by Senators Smathers and Holland and Representatives Fascell and Rogers of Florida. The plan has been several years in the making, and is endorsed by the Advisory Board on National Parks, the National Park Service, and the Governor of Florida, in addition to the sponsors of the bills, S.1790, H.R. 6641, and H.R. 6653. The original authorization for the Everglades National Park, made in 1934, was for 2,165,500 acres, consisting of 1,563,520 acres of land and 600,980 acres of water. Under the new proposal, final boundaries of the park would include an area of 1,337,800 acres, consisting of 919,400 acres of land and 418,400 acres of water. Two boundary adjustments have been made since the initial authorization. Purpose of the present plan to produce a final boundary within which acquisition may be made to exchange lands with the state of Florida.

RESISTANCE TO THE BILLS SEEKING TO ESTABLISH A NATIONAL WILDERNESS PRESERVATION SYSTEM took a new turn as the Legislature of the Territory of Alaska last month memorialized against the establishment of any more wilderness areas in known mineralized sections of the territory. Copies of the memorial were directed to the President, the Congress and to the agencies concerned. Up to now, Alaskans were seriously concerned with administrative actions placing lands in wild or wilder-

(Turn to next page)



ness categories, since administrative adjustments could be made as justified. The prospects of having vast areas of Alaska "frozen" into a Wilderness Preservation System gave rise to the Legislature's objections to further expansion of the wilderness concept. The memorial points out that approximately one-third of Alaska's total acreage has been withdrawn from mineral and other types of entry, and "these withdrawals are one of the factors retarding the industrial development of Alaska."

A PLANT PEST ACT, PASSED BY BOTH HOUSE AND SENATE, will establish specific authority for the Department of Agriculture to regulate and control the importation and interstate movement of plant diseases and disease-bearing organisms and insects. The measure, designed particularly to authorize control measures against fire ants and other specific pests not now under control programs, also broadens the authority of the department to permit it to regulate the movement of plant pests, generally.

A 10-YEAR PLAN FOR MIGRATORY-BIRD REFUGES is proposed by Representative Reuss of Wisconsin. The number 10 has a particular appeal to conservationists. Mission 66 is a 10-year plan for national park development. Operation Outdoors is a similar plan for recreational development in the national forests. The Reuss bill calls for a 10-year program of land acquisition for migratory-bird refuges and areas. Target is the federal acquisition of 4 million acres at a total cost of \$100 million. It is proposed that the funds come from the sale of duck stamps and from the sale of hay, furs, oil and timber on refuges. An increase in the price of duck stamps from the present \$2 to \$3 is requested. Critical of the Fish and Wildlife Service for using duck stamp money, in part, for administrative purposes rather than wholly for land acquisition, Representative Reuss asks that the entire duck stamp fund be used to purchase refuge lands. This would mean that appropriations would have to be increased to provide for refuge administration.

A MOVE TO KILL THE APPROPRIATION FOR MUNICIPAL POLLUTION CONTROL was averted last month in the House. A roll call vote of 231 to 185 upset a previous teller vote that would have deleted the 50 million dollars requested in the Department of Health, Education and Welfare appropriations bill for continuation of the grants-in-aid program for construction of municipal sewage and waste treatment facilities. The money is requested as the second installment in the 10-year, 500 million dollar water pollution abatement grants-in-aid program authorized by Congress in the Water Pollution Control Act of 1956. The administration is believed to be in favor of this appropriation although reports being circulated in Washington last month indicated that the move to kill the appropriation may have received at least some administration support. American Forests will not publish the roll call vote on this measure in this space as requested by some, but will be glad to send copies of it to those who request it.

"WHEN WE THINK OF FORESTRY WE MUST THINK OF ALL FORESTRY"—private, state and federal. Let us, however, emphasize private opportunity, private responsibility, for our economy itself is built around the concept of private ownership of property and upon the expectation of reward for private initiative, industry, and ingenuity," said Assistant Secretary of Agriculture Ervin L. Peterson at the 1957 Southern Forestry Conference of the Forest Farmers Association in Atlanta, Ga., in March. It is the firm policy of his department, he said, not to duplicate or compete with state governments in rendering forestry assistance to their own citizens. In a hard-hitting speech, the secretary placed emphasis on the responsibility of the states and the people to meet their own forestry problems and thus to retain the rewards of their management efforts. Government, he pointed out, produces nothing, "it is only a consumer of production and never can it return to the people as much as it has first taken from them." He urged that citizens everywhere cease pressing for ever-increasing public responsibility in the many facets of our national life, since "only increased public spending and increasing taxes can result."

HOUSE CUTS IN THE BUDGET FOR THE DEPARTMENT OF COMMERCE include two affecting forestry and the forest industries. The House in acting upon the \$871.5 million commerce request, eliminated all funds for the major industry divisions of the Business and Defense Services Administration, including the Forest Products Division. It also reduced by \$3 million the \$28 million request for forest highways (public highways built through national forests).



# Editorial

## Action in the Heart of America

AFA is making a determined effort to place a reprint of its recent forestry career issue in each of the 28,000 high school libraries in the country. Meanwhile, the effort to boost forest school enrollment is receiving support from both foresters and laymen who have obtained extra copies and in some cases have provided forest career counselling in their local schools.

Additional welcome support has come from editors of weekly and country newspapers and if we can get enough of these people behind us we ought to have it made. As a boy living in the country years ago, we recall there were four prime movers in our community. One of these was the editor of our paper who read the Congressional Record from cover to cover and embellished it with his own tart comments when he published excerpts from it. Another was our county agricultural agent. Yet another was the minister who looked after the community's spiritual needs and, of course, our doctor who ushered us in and out of this world. In our town, the doctor disagreed with our editor on his politics and with our minister on his belief in the Hereafter. On cold nights when your hand would stick to a pumphandle, pedestrians would hear them arguing about the Hereafter as they passed by in their cutter en route to give comfort to some patient who was about to go there.

We haven't heard from any ministers, doctors or county agents yet so perhaps weekly editors can stir them up. In this connection, it seemed to us that Chapin Collins, editor of the *Montesano*, Washington, *Vidette*, did a good thing. He ordered extra copies and placed them in his high school. Then he wrote a front page feature (Chapin's Column) about it. Here are some of the things he said:

"I would like to have every upper classman in our Montesano high school see the current issue of the *American Forests* magazine, so I am sending back to Washington for some extra copies to place in their hands. This issue is a special one, dealing with opportunities in forestry. Real authorities describe what forestry means today, what it consists of, how you get to be a forester, and what remuneration and other advantages you may expect in this field. The fact is that there are too few foresters to go around, and this should be of special interest in this land of forests. . . .

"The whole field of forestry has changed in the last 20 years. In fact you can see the advent of our own Clemons Tree Farm in 1941 as a turning point in the profession of forestry. (Note—Mr. Collins fails to mention that the Tree Farm idea which has now spread to most of the United States was originated in his editorial office.)

"In those years, most of the foresters who came out of our colleges had to look to the govern-

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## Five Bridges to Cross

Stewart Holbrook once said that he would like to put out a newspaper on forest life—its sounds, changing moods, and life and death struggles. We don't know if he ever did or not but it was an appealing thought. However, rightly or wrongly, we get the impression that his newspaper would deal only with the forest, the soil, the wildlife and the water. People seemed to be excluded. That probably would have been possible once upon a time. But not any more. Today the impact of people on the outdoors is too great to be discounted. And it's growing. In fact, we sometimes wonder if the preamble on our masthead should be changed to read "an association . . . for the advancement and intelligent use of *people*, forests, wildlife, soil and water." For aren't these actually the five great basic renewable natural resources? And people, certainly, are not the least of these.

We were thinking about these things while reading a new book entitled, "America's Natural Resources." It is published by the Natural Resources Council of America, of which AFA is a member. There's a good chapter in there on forests by Lowell Besley and Henry Clepper. Progress in each of the other renewable resource fields is described by experts. There was one line in the final chapter by Dr. Ira Gabrielson that took our eye and seemed to wrap up what both this book and the Council are all about. It is: "The development of the movement for conservation of renewable natural resources approached maturity when the fact finally became apparent that it is impossible to manage one resource independently of the others."

And what a remarkable gain that is, when you stop and think about it. For years, many conservation groups have regarded themselves as little islands of specialized activity. Today that's changing fast. It reminds us of something our oldest boy said not long ago. When one of our favorite tulip poplars crashed down over the brook in a windstorm, we thought he would be greatly disappointed. But not a bit of it. "Look," he said, "Now we have a bridge to cross over and explore the other side."

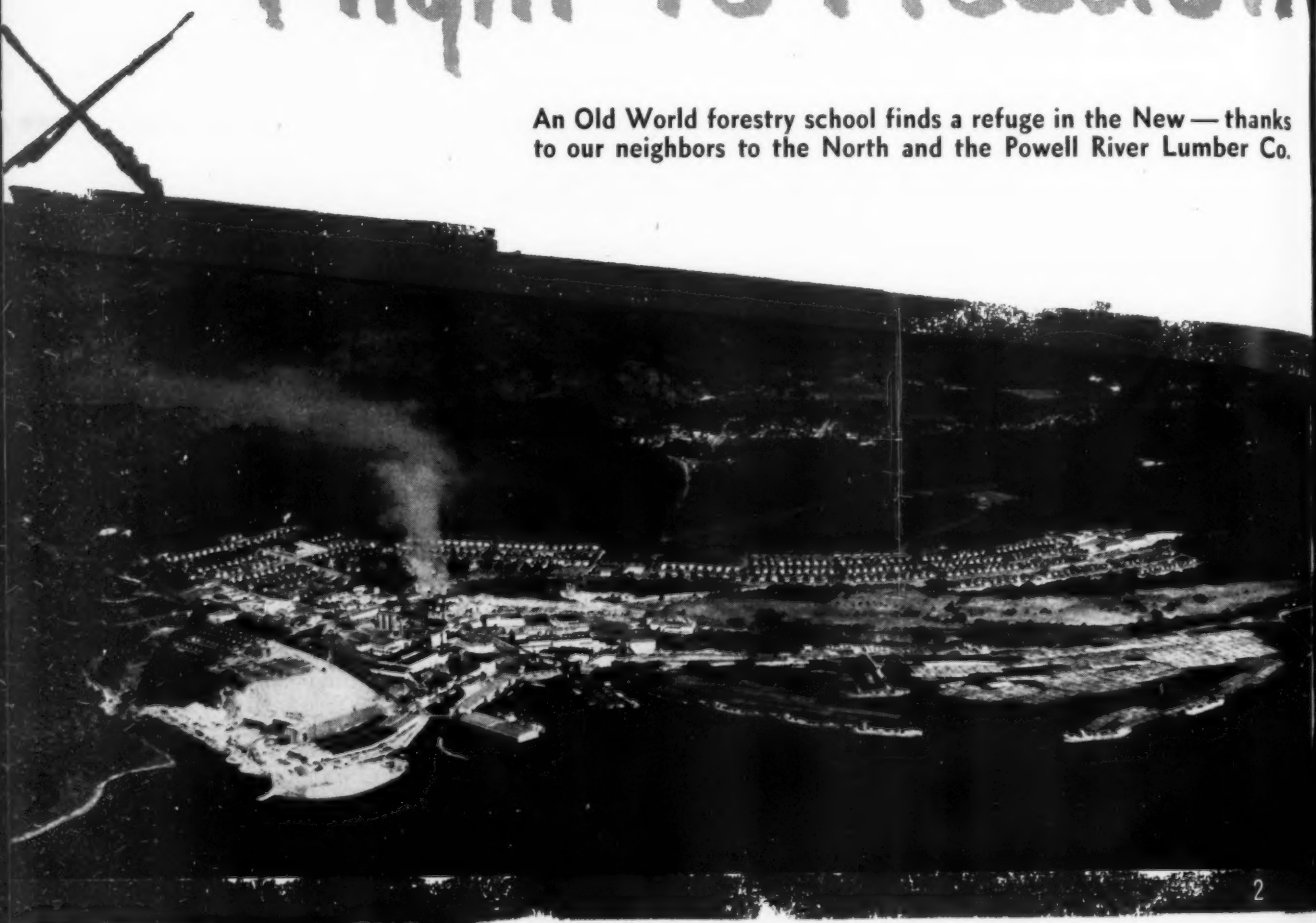
Conservation is beginning to be like that today. We're getting our bridges built. We're beginning to explore the "other side." Does that mean that everything is going to be smooth sailing from now on? Quite the contrary. There will probably be some mighty loud explosions as this process continues but these explosions will be signs of health rather than otherwise. The Natural Resources Council, which has had its ups and downs, is proof enough of this. As a matter of fact, AFA was almost mad enough to quit at least on one occasion itself, but stuck. The important thing is that here at last is a conservation group of different elements, not unlike

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By ROBERT FORBES and JAMES B. CRAIG

# Flight to Freedom

An Old World forestry school finds a refuge in the New — thanks to our neighbors to the North and the Powell River Lumber Co.



2

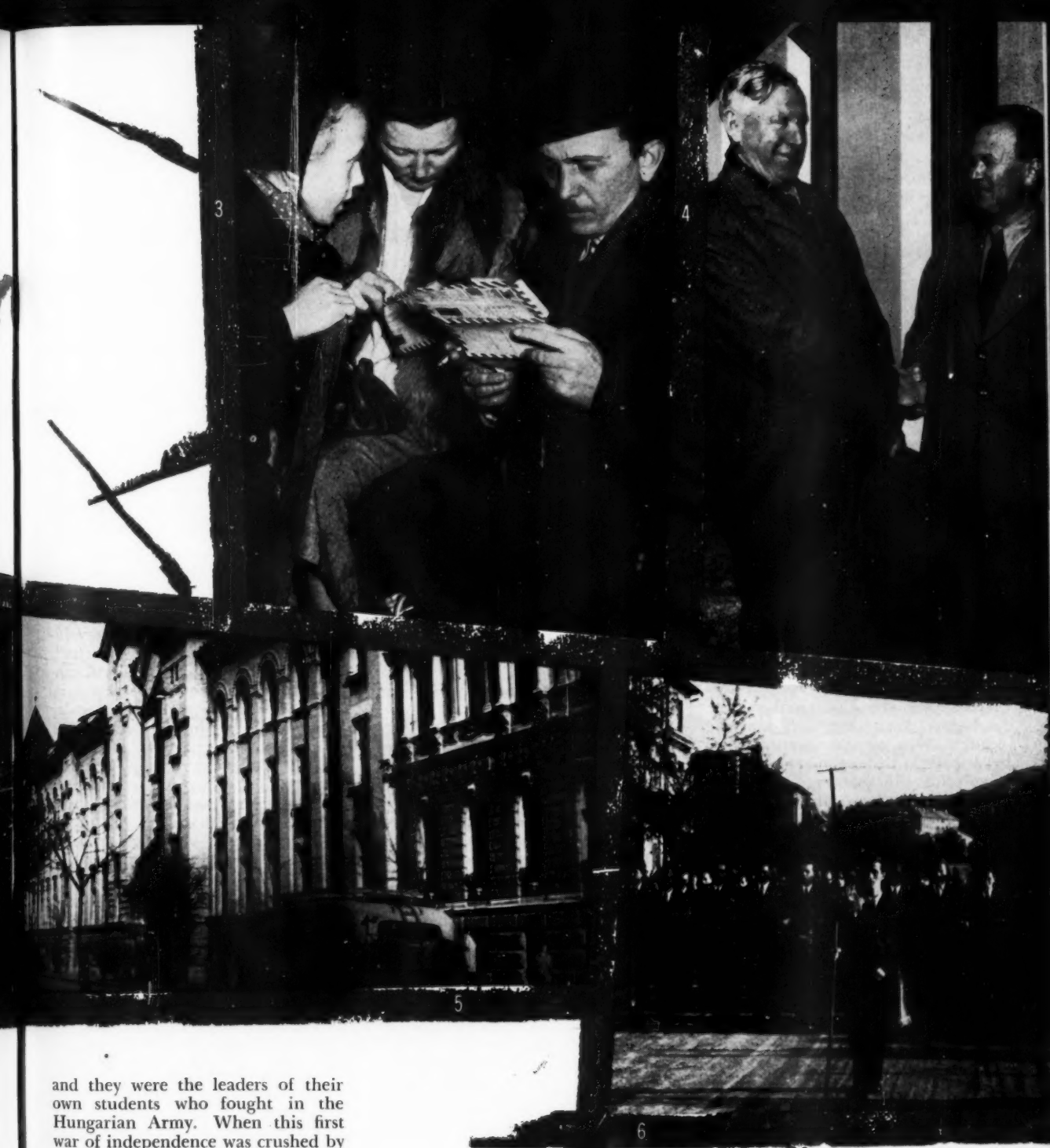


**T**HIS is the saga of 300 Hungarian men and women who refused to bow to tyranny. It is also the story of a school—the School of Forestry of Sopron University—which for 150 years has maintained that freedom is the loveliest word in any language. These people, the faculty and students, fought for freedom in last year's Hungarian Revolution and finally withdrew to the New World only after they had exhausted every means at their command to raise the siege of dictatorship in their country and restore some semblance of human dignity.

They failed. But foresters everywhere can rejoice in the proud part the faculty and students played in that failure. Both the 150-year history of Sopron University and the part its students played in the most recent battle clearly proves that tyranny can only be transient—that freedom can never be completely squelched in any land so long as that land's schools and universities keep the lamp of freedom lit.

For Sopron University has a proud tradition. In 1848, it stood with Kossuth in the Hungarian War of Independence. The professors were the technical consultants of Kossuth

AMERICAN FORESTS



and they were the leaders of their own students who fought in the Hungarian Army. When this first war of independence was crushed by the Russians, the school was closed only to reopen again one year later.

After the first World War, Hungary was cut to pieces and Selmesbanya, the location of the school at that time, was ceded to Czechoslovakia. The forestry school moved lock, stock and barrel to Sopron where it functioned uninterruptedly and with distinction for many years.

Then came the Soviet regime. Once again these freedom-loving young forestry students bristled. The

1. Tower of City Hall in Sopron, Hungary, former home of Sopron Forestry School
2. Town of Powell River, B. C., the new temporary site of refugee forestry school
3. Mail, and news of loved ones, was first thing faculty sought on arrival in Canada
4. Pres. Mackenzie of Univ. of B. C., greets Dean Roller, of Sopron Forestry School
5. This boys dorm at Sopron School was cleaned out in a hurry when students left
6. "Last year" boys at Sopron marched around town for last look before leaving



autonomy of the university was taken away. The Soviets decreed that the Communist government's educational policy and control should be strongly influenced by the Russian system. The school was commanded to teach Soviet advances in science and the Russian scientists' methods and to demonstrate "Soviet leadership in culture." They established new Russian language, Marxism, Leninism and military departments which were to teach the potential foresters the Soviet political ideas and military sciences according to the line of the hated "Soviet patriotism."

All the old traditions and customs of the school were oppressed by the Communists for 12 long years, but both the staff and the students kept those in their hearts as they worked for the day when their leaders would no longer urge preparation and caution and they would be able to explode with all the force of dedicated youth against their oppressors. As one Sopron professor said gravely, "It is not an easy thing to teach fighting and freedom to young men for 12 years and urge caution and restraint at the same time."

Last year, the glorious day came and once again the staff was the leader of its own students as they took part in the organization of the revolution in western Hungary. They destroyed the anti-Hungarian Soviet monuments, they hauled down Soviet flags, they succeeded in outlawing the secret police, and they



**Hungarians are shown points of interest in Vancouver en route to Univ. of B. C. Prof. Adamovich, forest engineer, holds one of his children**

succeeded in re-establishing the old political parties.

But these initial successes were short-lived. On that fateful November fourth the Soviet Army struck. The Hungarian government was captured. A great tide of Soviet armor came clattering through the streets of Hungarian towns and villages. Some of them were destroyed. But more came behind them with relentless intensity.

It soon became obvious that poor-

ly-armed students and other revolutionaries were powerless to check this advance. As Prof. L. Adamovich, of the Sopron faculty, put it, "All of our students and faculty members were in the revolution against the Russians, of course. It got to the point where the Red secret police even fired on students in Sopron and Budapest when those students were unarmed."

"In the words of you Americans, we recognized that 'we'd had it.'"

**Enthusiastic sports fans, the Hungarians obviously enjoyed their basketball game treat — note applause and the open mouths. Their banner hanging at the luncheon was taken to gym**





Neither the students or the school had any future in Hungary. Some of us learned of the idea of leaving our homeland as a group at 7:30 one November morning. By 10 o'clock the same morning we were on our way to Austria, five miles from Sopron. We had just time enough to gather our families and put on our best clothes and shoes. There was no wasting time for packing luggage. In all, our exodus included 200 students, 40 of whom were women, 17 faculty members and 65 wives and children. Yes, some of our students came across the border armed but not all. However, there were no incidents."

In Austria, the students headed by Dean Kalman Roller found a temporary refuge at St. Wolfgang.

By this time, of course, the great trunk wires of the world's news services were buzzing with the news of the escape. People everywhere were exhilarated by the account of the exodus from slavery or worse. The saving of an entire school was news enough in itself. But here was a school engaged in training young men to manage for the future the earth's renewable resources of forests, water, soil and wildlife. No wonder, then, that the story exerted so great an appeal. In short, Hungary's present might be bleak, but there was still hope for the future so long as men like this could crash through the Iron Curtain and continue working for tomorrow.

In forest-minded Canada especially, this story exerted great appeal. The story was told and retold from one end of the country to the other



From left to right: Dean Kalman Roller, Dean George Allen, Mr. John E. Liersch, vice pres., Powell River Co., Mr. Philip Bird, Immigration Dept.

and consequently mid-December found Immigration Minister John Pickersgill in Vienna and later at St. Wolfgang exploring the problem of "how Canada might help."

"This is a worthy school and a worthy group," Mr. Pickersgill reasoned. "Furthermore, Canada, particularly British Columbia, is short of qualified foresters and here are not only foresters but the incubator that hatches them."

Accordingly, Mr. Pickersgill picked up the telephone and put through a call to Canada to the Honorable James Sinclair, Minister of Fisheries, and proposed that Canada

look into the possibility of transferring the entire school to the University of British Columbia.

Dr. Norman Mackenzie, president of U.B.C., was enthusiastic when informed of the proposal by Mr. Sinclair. Then, on second thought, he informed the minister that the university already faced a critical housing problem because of its booming student population.

"Tell you what," President Mackenzie suggested. "Let's make an appeal to the forest industry to see if it can provide accommodations for the school until such a time as we can absorb it at the university?"

That was done and within 24 hours the whole deal had firmed up. H. S. and M. J. Foley, of the Powell River Company Limited, promptly offered to provide temporary accommodation for the school at Powell River in the construction camp built to house 550 men who had been working on the company's No. 9 Machine.

Moving swiftly, the government next asked Dean George Allen, of the university forestry faculty, and F. H. McNeil, of the Powell River Company, to fly to Austria to lay plans for the orderly movement of the school to Powell River.

Dean Allen and Mr. McNeil flew to Austria on December 13. The trip intensified their determination to bring the school to Canada.

"The Sopron students were amazing," Dean Allen relates. "While covered by the poorest of clothing,

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Sopron University faculty, students and their families relax over dinner in one of the structures provided for them by the Powell River Lumber Co.

Science can make an important  
contribution to conservation by estimating  
the extent of our resources and  
determining methods for their perpetuation

By ALAN T. WATERMAN  
Director,  
National Science Foundation

## The Scientific Ba



# Basis for Resources Conservation

As I see it, science enters into resources conservation in several important ways. First and most obvious is the need for fundamental research to provide needed data and to illumine our conservation practices; second is the need for training young scientists for work in ecology and related fields; and third is the need for scientific data to guide the development of policy with respect to the innumerable and complex problems that confront our government in this field. At some point, of course, there must also be developmental programs, based on the results of research and the policies that have been evolved.

As a physicist, I can claim no special competence to speak about problems that have been more particularly the concern of biologists and geologists, and even the economists, except that in these days physicists seem to be involved in a multitude of subjects to a degree that would astonish our predecessors. On a practical, "low-level" plane, as Washington would say, I can perhaps better qualify on the basis of thirty-odd summers in the Maine woods (the Allagash

*An address delivered at the North American Wildlife Conference, March, 1957, Washington, D. C.*

country), where for a number of years I have held a guide's license. Or, I could qualify myself on the basis of the recent statement by a colleague and friend who is known to you all, Dr. Paul Sears, who declares that "Systems or processes which involve organic activity resemble purely physical systems in being expressions of thermodynamic law, tending to approach a condition of minimum stress and balance." I also approach these questions on behalf of the National Science Foundation, since we have specific responsibilities in all three of these aforementioned areas. . . .

One would think that science was the natural handmaiden of all organized efforts to conserve and preserve our natural resources. By a curious paradox, however, science and technology have, in one sense, actually militated against conservation practices. With respect to our natural resources there are *three schools*: one that feels great concern for the continuing supply of our natural resources; another that feels that science and technology will be able to bail us out of any shortages we may encounter as a result of our failure to conserve our resources; and a third that has little or no interest in the problem. Unfortunately the latter category is by far the largest, so that conservation is in constant danger of "too little and too late." These diverse points of view have made it difficult to get a scientific and impersonal appraisal of the situation.

Our ideas on conservation have until recently been largely on an *intuitive* or an *aesthetic* basis. Conservation measures usually developed around a particular resource which interested a special group. They have therefore had the earmark of special pleading, and we have neglected to look at the over-all problem from a scientific point of view. We owe a great deal, however, to the special groups whose hard work and devotion to the cause led to reforms in many areas. As the Chaplain of the Senate,

Dr. Frederick Brown Harris, remarked in a recent newspaper column: "The alert battalions of conservation are our land's chief defenders. They are the Paul Reveres, warning of threatening invasion."

Today we see that to the dedicated efforts of individuals and groups there should be added the scientific analysis of the over-all problem, and that a high degree of cooperation and unity of purpose on local, state, and national levels is required. Such a step is inevitable. The problem is nowhere so eloquently stated as in Sears' great book, *Deserts on the March*. Written in 1935, it sounded a wise warning which we should have done well to heed. In a supplemental chapter, written 12 years later, in 1947, he remarked with respect to the various groups working in the field of conservation:

Here too the past decade has witnessed a quiet but profound change. Each group, following its problem to the source, has bumped into the others—as explorers working up the fingers of a delta must ultimately meet at the parent stream. You cannot have fish without an abundance of clean water. You cannot have water, either for fisheries or industrial use, without forests and well-managed farms which will regulate the flow of water after it falls. You cannot have an adequate supply of timber without an intelligent program of land use. Wildlife must have suitable conditions in which to live and breed. Game animals, songbirds and wild flowers require areas of native vegetation—whether forest, grass, or desert—not required for other use. To feed and clothe itself, and certainly to engage in world commerce, this nation must protect its soil from destruction by wind and water.

Science can aid these efforts by furnishing us an estimate of the extent of our resources and the best methods of making them continuously available. It can also give us a realistic picture of man's place in nature. Is he, for example, an exception to the principle that no organism has ever been known to increase and spread its kind without en-



(Left) President Eisenhower, Secretary Benson, Susan Eisenhower, Mrs. Eisenhower

## The President Plants A Tree

For some months, President Eisenhower had entertained a desire to plant a tree on the White House grounds in honor of Abraham Lincoln. Last month, one morning after Cabinet meeting, the members walked out to the lawn where a black walnut tree shipped in from New Salem State Park, Illinois, was waiting. The tree had been sent to the President by Governor William G. Stratton and was accompanied by "my best wishes and those of all the citizens of Illinois, for you, and for the nation."

The tree was planted by the President as Secretary of Agriculture Ezra Taft Benson stood by his side. The President made no formal statement but Secretary Benson said that he considered it singularly appropriate that the President should plant a tree from Lincoln land in honor of a President who in 1862 created the Department of Agriculture, which is now responsible for forestry and other conservation activities.

"We must get more people planting trees," Secretary Benson said. "Over 50 million acres of commercial forest land need planting, according to preliminary findings of the nationwide Timber Resource Review, recently issued by the Forest Service. Also five million acres of submarginal lands, now in tilled crops, should be planted to trees under the Soil Bank program."

"We can't over-emphasize the importance of trees—not only for wood they supply but for the ground cover they provide to stabilize the flow of water; the homes for wildlife; and the backdrops for pleasant recreation."

countering limitations? Man has clearly made himself a dominant species. In some respects he is unique, in that he has been able to break through the barriers of climate and distance. A most challenging scientific question today is how much longer man can continue to intensify the pressures on his environment. Copernicus long ago disabused us of the notion of our planet as the center of our universe. We still retain, however, the old teleological notion of man as the center of his own world, with everything in it designed for his sustenance or pleasure. It may be that only as he develops a more mature conception of himself as merely a part of his complex biological and physical environment will man be able to save the essential elements of that environment for the mutual good.

To govern his course wisely, he needs much basic knowledge, not now available, about living organisms, both plant and animal, and about their physical environment. I am glad to be able to say that in the National Science Foundation our earth sciences and environmental biology programs are currently supporting a considerable number of research projects that are devoted to acquiring very fundamental data of this kind.

In the earth sciences program, the projects fall in three general categories: (1) meteorology — problems relating to rainfall, water conservation, etc.; (2) nature and origin of mineral deposits; and (3) processes of erosion and soil formation. Incidentally, the International Geophysical Year, that world-wide, cooperative undertaking in geophysical research, which will begin on July 1, will undoubtedly produce much data of potential value to conservation efforts.

The numerous projects being supported under our program of environmental biology are so varied and contribute to conservation and management problems in so fundamental a way that they do not lend themselves to convenient classification. I should like to mention a few, however, to illustrate the fundamental kind of information I feel we should be seeking in order to develop wise conservation policies, particularly where such policies affect wide geographic areas.

One group of projects is related to understanding the physical factors influencing the biological productivity of the oceans; and another group seeks similar and related information about the influences affecting the productivity of fresh-water bodies. At Woods Hole Oceanographic Institute, a marine biologist, Dr. John Ryther, is investigating the "Effects of Ultraviolet Radiation Upon Marine Plankton Algae." It has been

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# The BAKER LABORATORY

By HENRY F. UNGER

**A new multi-million dollar structure of State University College of Forestry, Syracuse, N. Y. will enable more graduates with professional training to enter the wood-using industries**

and concluded on May 3 with the formal presentation and acceptance of the building.

The symposium took place at 2 p.m. Thursday, May 2. The theme was "Forest Products in Today's World." Mr. Clyne Crawford, trustee of the College and president of the Crawford Furniture Manufacturing Co. of Jamestown, N.Y., presided. Four speakers scheduled for the symposium were: Richard E. McArdle, chief of the United States Forest Service, Washington, D. C., who discussed "Forest Products—Key to Forest Management;" S. W. Antoville, president of the U. S. Plywood Corp. of New York City, who spoke on the topic "Research for Wood Products;" O. H. Alderks, vice president in charge of research and development for the Buckeye Cellulose Corp. of Memphis, Tenn., "Research for Cellulose Products" and George A. Garratt, dean of the School of Forestry at Yale University, "Education for Forest Products Leadership."

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**S**TATE University College of Forestry at Syracuse University, Syracuse, N. Y., dedicated its new three-and-three-quarter-million-dollar Hugh P. Baker Laboratory building for education and research in forest products on May 2-3. Two-day ceremonies commemorated the occasion.

The Honorable W. Averell Harman, governor of the State of New York, officially presented the new building to State University of New York and the College of Forestry.

Prominent New York state officials, leaders of forest industries and educators also participated in the building's dedication.

Dean Hardy L. Shirley also announced that the general chairman of the dedication ceremonies was Frederick S. Cryslar, an alumnus of the college, class of '32, manager, Eastern Division, Container Corporation of America, Philadelphia, Pa.

The dedication program consisted of a symposium on forest products, a banquet on the evening of May 2

# LOGGING IN RECREATIONAL

ONCE again there is logging in southern California forests after a lapse of about a half century. Actually, there never had been much, except primitive logging by Spaniards and Mexicans, and some very small operations by the early American settlers. These, however, practically ceased with the development of coastal shipping and the advent of the railroads, bringing large supplies of cheaper lumber from the North. For the last fifty years the national forests of southern California and all private lands within them have been more or less dedicated as watersheds and as recreational areas. The public has long regarded these mountain forests as reserved for its use. To a forester, however, most of the trees are over-age and subject to a high mortality from the attack of insects. During the last decade there has been an increasing cycle of insect-killed trees.

Spot control has proved very expensive and has not been too effective. The United States Forest Service concluded that the best way to save the forest for future generations would be a sanitation-salvage logging program. Anticipating the possibility of an explosion of public opposition, the Forest Service proceeded with great caution.

Would people balk to the logging of trees which they have long regarded as reserved for recreation? Would they accept the cutting of some of the largest and oldest trees, not recognizing their decadence? Would they understand the significance of a sanitation-salvage logging program? For many years they have considered these forests almost in the same category as national parks. Would they now accept forest management of recreational forests?

The answer appears to be YES. As they have seen the program de-

velop and have become informed, they have accepted it, perhaps not with enthusiasm but at least with resignation, somewhat in the same manner as a man who has broken his arm will accept having it tied up with splints. This southern California sanitation-salvage program is indeed a history making forestry project. It is setting some precedents in forest management and in the public relations of the U. S. Forest Service.

Foresters from northern California, accustomed to heavy stands of exceptionally fine timber, are apt to smile when one speaks of the forest resources of southern California; yet there are probably no forest lands in the world with a higher economic value. These precipitous mountain areas, generally covered with porous granitic soils and disintegrating granite, form an exceptionally efficient watershed,

High in the San Bernardino mountains, selectively harvested timber is loaded for trip to sawmill at Redlands, 45 miles away



# FORESTS

By W. S. ROSECRANS

producing for the Metropolitan area of Los Angeles a water crop estimated by the California State Department of Water Resources as averaging 775,000 acre-feet annually. The value of this water in an arid region is so great that if one were to try to place a dollar value on it, it would require almost astronomical figures. It would also be difficult to estimate the dollar value of the recreational use of these areas. Almost 10,000,000 people visit them annually. There are many famous resorts, such as Lake Arrowhead, Big Bear Lake, Sky Forest, Mount Baldy, Big Pines; there are also great numbers of organizational camps and more than 10,000 summer homes. Some observers state that the southern California national forests are the most heavily used recreational forests of the nation.

Due to climatic influences, various types of brush and small trees oc-



In disposing of the slash, limbs and tops are cut up and allowed to dry, then are piled like this, and protected by paper until the time for burning



Less than a year after sanitation-salvage job, the marks of logging operations are much less distinct



Above, felling snag to salvage fire-killed timber; right, timber marking for a sanitation-salvage operation





**Fire salvage at the Lake Arrowhead camp of the Los Angeles Boy Scouts, which was partly devastated by fire**

**Timber faller does his bit to save for use an incense cedar tree killed by fire at Lake Arrowhead camp**



cupy most of the mountain areas up to the 5,000-foot level. Coniferous trees seldom are found below this level. As the granitic soils are low in fertility, rate of growth is slow and stands are open. There is quite a high proportion of old trees. For over a decade, during a cycle of dry years, these older trees have been subjected to increasing attacks by insects.

As tree-killing insects multiplied and losses mounted, a costly and difficult effort was made to control the threat by means of direct extermination of broods. Felling the in-

fectured tree and peeling and burning the bark was the method used, and it cost up to \$80 per tree. Some of the Forest Service men and entomologists on the scene recognized the futility of trying to take care of the situation by direct control alone. They felt sanitation-salvage logging would be the best way. Take out the weak, ancient, doomed trees—the insect bait—by means of light timber sales. But who would do it, and would the public stand for it?

Several small mills were operating around there, but none was deemed large enough to do the kind of job

the Forest Service thought necessary. In an effort to interest a top-flight operation, wise in modern ways of light harvests, the timber management division of the regional office in San Francisco decided to try a major timber sale of 7,000,000 board feet in the Barton Flats area east of San Bernardino. This was a historic decision in the light of opposition expressed not only by local conservation leaders and "recreational" foresters but by some foresters in the regional office itself.

So the sale was put up, and it  
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**Project leaders: left, David H. Rogers, Sim E. Jarvi, Jim Mace, DeWitt Nelson, W. S. Rosecrans, and Henry J. Vaux**

**A scaler measures up load of 16-foot second growth logs salvaged from the fire-killed forest at Boy Scout camp.**





There will be more game fish in Florida as the rough fish are being eliminated

**E**LECTRICITY, that well-known commodity used for lighting houses, factories and office buildings, running washing machines and vacuum cleaners, and for hundreds of other purposes demanded by our modern way of living, is now playing an important role in the lives of fishes. By means of various gadgets, gimmicks, contrivances, devices and inventions, electricity now does the darndest things to the piscatorial residents of America. It is used to count certain fishes, trace the routes taken by spawning salmon, even to the point of directing them on their way both up and down stream. Some devices are used to control fish populations, thereby making for a well filled lake or stream, which in turn causes great rejoicing among anglers. In other instances electricity is used to kill parasites of various kinds (including even some fishes) that prey upon desirable fishes.

Over the years man has been outstanding in his accomplishments in destroying fish life. Pollution from factories and cities has slaughtered fish by the untold billions, and it seemed the more man progressed and expanded, the more toll he took from natural resources. Progress, it appeared, must be made at the ex-

pense of wildlife; and fish were in the forefront of such resources considered expendable.

More recently man has decided to take counter measures to offset some of the destruction he has wrought. All of these measures have the ultimate aim of increasing the number of fish in rivers, lakes and streams.

Among the more widespread areas of man's endeavors to give fish a helping hand is the Columbia River Basin of Oregon and Washington. The two principal fish being given a workout by means of various electrical gadgets are salmon and steelhead trout. Man has erected so many dams on the Columbia and its tributaries, that fish have a hard time of it getting from one place to another. Migration is the very essence of their existence. If the adult fish can't get upstream during the spawning season, they will have no offspring. And if the young salmon and trout can't get downstream to the ocean after they're hatched, there will be no adult fish to go upstream to spawn. It is a never ending cycle; and if it is ever completely broken, there will be no more salmon or trout in the Columbia River.

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# JUICED UP FISH

By CLEVELAND VAN DRESSER

Tim O'Connel at controls of electric "fish shocker," a device he developed



Whitefish River in Michigan has electrical barriers to stop sea lampreys from migrating upstream from Lake Michigan. This method has been quite successful



# UNPLANNED P

**B**Y the middle of April, 1957, both Houses of Congress had recommended deferment of sales of tribal property involved in Public Law 587 covering termination of federal supervision over the Klamath tribe of Indians (See "Up-roar on Klamath Reservation," *AMERICAN FORESTS*, January, 1957). Although the newly amended versions of S. 469 still must go to conference to iron out other differences, there is assurance that all interested parties are being granted a grace period of approximately 15 months in which to answer the \$64,000 question: How can federal supervision be terminated in a way that will 1) be in the best interest of the Indians; and 2) insure sustained yield management of the timber resource as well as protection of water, wildlife and other resources?

Although all the facts needed for evaluation of Klamath problems have not been released, the ranks of public opinion already are forming. Poised on one side are those with a financial interest in immediate liquidation of Klamath assets. This means selling the land (timbered or otherwise) on the open market in relatively small lots. Others feel that federal purchase is the only way to insure protection and wise use of all the resources. Still others contend that private industry should manage the property. They point out that 51.6 percent of the state of Oregon already is in federal ownership, with accompanying restrictions to the tax base and to opportunities for free enterprise.

The decisions reached, whatever they may be, will have a significant impact on Indians and their resources for many years to come. The American Forestry Association believes that this case, and others in the offing, must be settled by the Congress of the U. S. on the basis of what is best for the ultimate benefit of *both* the Indians and their resources, for the welfare of man is tied inseparably to his use of available resources. In view of the decisions being made, The American Forestry Association believes that a recapitulation of federal-Indian land

policies since the days of our forefathers is now in order. In short, a groundwork based on historical precedents *must* be laid. This article will be followed at intervals by analyses of Klamath wildlife, water, grazing, and timber resources; and discussion of termination plans when all the facts become available. Readers will require this information in deciding intelligently whether public acquisition is or is not the proper solution to Klamath and to some six million acres of other commercial forests in Indian ownership in Oregon and other states. To date no such proposal has been made in Congress, but there are ample indications that such a bill may be introduced as soon as the present deferment bill clears the way. And now to history.

## Evolution of Federal-Indian Land Policies

In the first century following the birth of the United States, the irresistible pressure of an aggressive, land hungry flood of migrants produced problems which were met as current exigencies seemed to dictate. Federal policy, veering with public opinion, contributed directly to some of the darkest pages in American history — the Cherokee Trail of Tears, and the unjust imprisonment of Chief Osceola.

Today the beginning of a fifth major trend is apparent—termination of federal supervision over tribal affairs. Termination laws affecting nine tribes have been enacted by Congress since 1954. Four new proposals are before Congressional Committees and two additional tribes are preparing for termination.

Will history disclose that this policy is the product of wisdom and statesmanship? Or will it show that the clamors of divergent interests have obscured the best solutions? And how have other policies fared?

## Integration

From the beginning of French colonization in America, Indians were encouraged to adopt Christian ways and to remain in close contact

with the settlements. Inter marriages were common. The welfare of the Indians also received the attention of the early English settlers. In 1633 the General Court of Massachusetts declared that any Indians, who should come to the English plantations and live "civilly and orderly," should have allotments, according to the customs of the English. (For much of the historical material we are indebted to Kinney, J. P.—*A Continent Lost—A Civilization Won*, The John Hopkins Press, Baltimore, Maryland, 1937.)

The English colonists, however, soon discovered that the Indians were not inclined to follow the new example of land clearing and improvement. Furthermore, they were very susceptible to various schemes to separate them from their property. In recognition of this tendency a Virginia act of 1655, typical of those enacted by other colonies, directed that no land could be purchased from the Indians without the assent of the Grand Assembly.

In 1660 Virginia recognized that the English were encroaching upon lands of the Accomack Indians and directed that a tract be set aside for their maintenance. Thereafter for the next century and a half all reservations went to the tribes for communal use rather than to individual Indians.

Colonial law generally guaranteed the Indians protection in their land holdings. In the Royal Proclamation of October 7, 1763, the King of England declared that the several nations or tribes of Indians should not be disturbed in the possession of lands reserved to them. The United States incorporated similar policy into its basic law in the Northwest Ordinance of 1787 (1 Stat. 50).

## Isolation

A great migration of settlers across the Eastern mountains, immediately following the Revolutionary War, resulted in frequent clashes with the Indians in the Ohio Valley and in the area to the southwest of Virginia. Each race became embittered

# DPOLICIES

By KENNETH B. POMEROY  
Chief Forester, AFA

## LAND OWNERSHIP IN THE U.S.

	ACRES
Land Area of the 48 States	1,903,824,640
Retained by 13 Original States	462,939,040
Public Domain	<u>1,440,885,600</u>

### DISPOSALS OF PUBLIC DOMAIN

Military Bounty and Private Claims	95,000,000
Grants to States and Schools	225,000,000
Railroad Grants	91,000,000
Homesteads	285,000,000
Cash Sales and Other	335,000,000
<b>Sub-total Disposals</b>	<u><b>1,030,526,653</b></u>
Indian Tribal Trust Lands	39,486,712
In Trust for Individual Indians	13,662,071
<b>Sub-total Indian Land</b>	<u><b>53,148,783</b></u>

### FEDERAL OWNERSHIP JUNE 30, 1955

	Acquired	Public Domain
National Forests	28,066,145	139,413,607
Defense Department	11,194,898	14,196,889
Indian Service	559,568	647
Reclamation Service	1,613,455	8,231,940
National Parks	4,276,938	10,622,152
Fish and Wildlife Service	2,752,077	5,310,464
Grazing Districts	-----	142,403,429
Vacant, Unreserved	-----	27,289,231
Other	2,223,149	9,741,805
<b>Sub-total</b>	<u><b>50,686,230</b></u>	<u><b>357,210,164</b></u>
Total Federal		407,896,394
Total Non-Federal		1,495,928,246
Total Acreage in all States		<u><b>1,903,824,640</b></u>

by the conduct of some representatives of the other and the achievement of peaceful co-existence seemed impossible. Dissatisfaction also was increasing in the older settlements. Efforts to provide Indians with hunting grounds had failed and attempts to encourage their self-support as farmers were generally unsuccessful.

These difficulties began to come to a head in 1802 when the area that later became Alabama and Mississippi was ceded by Georgia to the United States on condition that the federal government extinguish the Indian title within the state of Georgia. A means of settlement appeared unexpectedly with acquisition of the Louisiana Territory and President Jefferson suggested removal of the Indians to locations west of the Mississippi River. Although a few Indians moved westward voluntarily, the others refused and relatively little was accomplished during the next two decades. Lack of funds and conflicting claims also added to the difficulties.

In 1825 President Monroe told Congress experience had clearly demonstrated the impossibility of the Indians remaining within the present states. He recommended their removal westward where they could have adequate lands, and live in their own manner. Five years later President Jackson approved the act of May 28, 1830 (4 Stat. 411), "To provide for an exchange of lands with the Indians residing in any of the states or territories, and for their removal west of the River Mississippi." Re-election of President Jackson by a decisive majority in 1832 indicated general approval of his policies for complete removal of the Indians from contact with the white civilization. These policies were spelled out in detail in the Non-Intercourse Act of 1834 which covered regulation of trade and social relationships with Indians living in Indian territory.

Isolation attempts failed when southern and Lake States tribes resisted efforts to make them leave their homelands. Also national confidence in a policy of enforced removal was shaken by the tragic experience of the Cherokee Nation. After 23 years of negotiations and repeated treaties providing for removal farther West, the Menominee tribe in 1854 was given a permanent reservation within their ancestral homelands in Wisconsin.

### Segregation

In the two decades immediately

preceding and following the War Between the States, many people concerned with Indian affairs came to the belief that the tribes should be located permanently on reservations which contained only enough land for actual occupancy; the land should be assigned to them in severalty (severalty—Webster: "In or of one's own right.") As distinguished from the usual communal ownership of tribal Indians,) and the Indians required to live upon and cultivate the tracts assigned; and sufficient materials and equipment should be provided to enable the Indians to establish themselves as farmers. This concept developed partially from the pressure of immigrants for new land; from a feeling that the nation's strength lay in widespread ownership of individual farms; and from attempts to confine certain nomadic and warlike tribes within definite bounds.

Construction of trans-continental railroads, the accelerated westward march of Western civilization, and the continually rising tide of immigration established the belief that Indians could not be segregated indefinitely from non-Indians. Proponents of allotment became the dominant force and in 1887 secured passage of the General Allotment Act.

### Assimilation

New concepts do not spring forth ready-made and this change resulted from previous experiments over a period of seventy years.

As early as 1817 Congress permitted warriors who had assisted the United States in the Creek War to select 640 acre tracts for use so long as they continued to occupy the land. In the same year a treaty with the Lower Cherokees contained similar provisions. Subsequent treaties with other tribes often provided for grants of land to chiefs and sub-chiefs, perhaps as an inducement to accept the treaties.

The growing sentiment for individual allotments is indicated in Commissioner T. Hartley Crawford's report of 1838: "Unless some system is worked out by which there shall be a separate allotment of land to each individual whom the scheme shall entitle to it, you will look in vain for any general casting-off of savagism. Common property and civilization cannot co-exist."

Congress accepted the suggestion and in 1839 granted the Brotherton Indians free title to individual

shares of land in Wisconsin. Apparently the result was encouraging because similar action was taken with the Stockbridge Indians in 1843. Both tribes were given the full rights and privileges of citizenship. A later report indicates that by 1872 more than half of the Stockbridge Indians had decided to take shares of tribal property.

Although reports in the 1870's disclosed that many Indians were disposing of earlier allotments at a fraction of their real value, the conviction continued to grow that civilization was not possible without individual ownership of land.

The General Allotment Act of 1887 provided for the allotment of land suitable for agriculture or grazing within the various reservations in quantities of 160 acres each to heads of families, 80 acres each to single persons or orphans and 40 acres to each minor child; the issuance of patents to be held in trust for a period of 25 years; and purchase by the government of excess reservation lands not allotted "for the sole purpose of securing homes to actual settlers . . ." On some reservations, over 50 percent of the acreage was declared "surplus." Half a century later the unclaimed residue of "surplus" land was returned to tribal ownership under the Wheeler-Howard Act of 1934, some as recently as 1950.

Although some Indians favored allotment, particularly mixed-bloods and others with personal interests, opposition persisted for years in various tribes. The Menominee, Red Lake, New York and most Southwestern reservations, for example, still remain completely in tribal ownership. The Klamath Indians, however, accepted 775 allotments between 1887 and 1897.

Unforeseen problems began to arise almost as soon as the General Allotment Act was passed. Some allottees could not work their lands because they lived somewhere else, had only a fractional interest in the land, were too old, disabled or otherwise incapable. Also many did not know how to or wish to farm. Furthermore, most grazing allotments were too small for an economic unit. Consequently, when Congress provided for leasing in 1891, many Indians turned to this method of management. Efforts to prevent indiscriminate leasing resulted in great confusion, a condition soon intensified by the inheritance of allotments. By 1900 thousands of inherited tracts were unattended and year by



year heirship problems became more complex. In order to make productive use of the land and to provide for the needs of elderly people Congress, in 1902, authorized the Secretary of the Interior to make sales under certain conditions.

Within the next few years a number of acts, pertaining to specific reservations, provided for allotment and opening to settlement or sale of the surplus lands. Indian holdings were disposed of rapidly under these various provisions, and by 1920 much of the better agricultural land had passed into white ownership. Between 1887 and the abandonment of the allotment policy in 1934, Indian reservations shrank from 138,000,000 acres to 47,311,099 acres.

### Restoration

Although the supporters of the General Allotment Act confidently had predicted that the "Indian problem" would be solved in 25 years, it eventually became apparent they had failed to foresee the conditions that would develop. Indications of an impending reversal of policy appeared in 1928 when Congress authorized the Navajo tribe to purchase 258,000 acres with tribal funds and to lease 460,000 acres of private land.

The new era, now referred to by some as a return to segregation, blossomed with the Indian Reorganization Act of 1934. This act, also known as the Wheeler-Howard Act, provided a new lease on life for the reservation system. It forbade further allotments of land; prevented future alienation of restricted tribal lands; restored to tribal ownership the remaining surplus lands of any reservation previously opened; gave Indians the right to establish corporations and made available a \$10 million credit fund for the development of Indian resources; granted tribal councils greater authority; authorized the acquisition of lands and water rights; and made mandatory the practice of forest and range management. Acquisitions, which continued through 1948, aggregated 1.7 million acres. Restored surplus lands made up most of the balance and the total increased from 47 to 56 million acres before the tide turned.

All tribes did not accept the IRA Act. Some felt it to be a step backwards and others have stated since that it prevented Indian progress for 20 years.

The "golden era" ended in 1952 when the Bureau of Indian Affairs

was instructed to terminate federal supervision over Indians as rapidly as possible. The magnitude of the reversal is apparent by comparison with 1948, a year in which 2500 acquisition cases were processed, 818,000 acres of "open" lands were returned to the Colville tribe, and a proposal was made for a \$25 million fund for acquisition of land and resale to the Indians.

At high tide, 1945 to 1950, Indian holdings were classified as 0.5 million acres in irrigated farms, 3 million acres of dry farms, 34 million acres of grazing land, 16 million acres of forest of which only 6 million acres were commercial forest, and 3 million acres of barren or waste land.

Since 1952 the issuance of patents in fee and sales of land have alien-

ated an average of 400,000 acres annually. These actions have been taken at the request of the individuals or tribes concerned and have been stimulated greatly by the recent increases in land values.

Two very significant events occurred in 1938 and 1941 when the Supreme Court finally affirmed the complete ownership by the Indians of their lands; and rejected the legal theory that the Indians had only a right to use the lands held in trust status except where they had been bought and paid for. A third event, one which may have set a precedent for actions yet to develop, took place in 1940. Then Congress refunded the taxes thousands of Indians had been forced to pay when they were deprived, without their consent, of

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(Left) Fred E. Hornaday, AFA exec. vice pres., J. V. Whitfield, pres., Forest Farmers

### Point of No Return?

President Don P. Johnston, of The American Forestry Association, last month told the Forest Farmers Cooperative that "we are rapidly reaching the point of no return in either solving our water problems or not solving them and in my opinion forestry, which has kept its eyes glued on forestry improvement programs, is not entirely blameless. Water must be regarded today as the most important resource problem in the United States and in forestry we must learn to 'think' water just as we 'think' forestry." The address was delivered by Fred E. Hornaday, AFA executive vice president.

"It would be pleasant to embrace the Cornucopian philosophy at this point and tell ourselves that technology will work out all these problems for us in due course," President Johnston said. "We hope they will. But in our own field of forestry we cannot afford to adopt that philosophy for the simple reason that if we merely stand still and wait we may see some of our own forestry gains go down the drain.

"We need answers based on scientific fact and good answers," Mr. Johnston said.

# THE WILDERNESS



Photo by John Kabel

By JOHN W. SPENCER

CONSERVATION history may have well been made at the Fifth Biennial Wilderness Conference which just closed in San Francisco.

This conference sponsored by the Sierra Club, enlisted the participating cooperation of the American Planning and Civic Association, The Federation of Western Outdoor Clubs, The Izaak Walton League of America, the National Parks Association and The Wilderness Society. Also participating in the discussions were the principal land managing agencies of the federal government, viz: Bureau of Indian Affairs, Bureau of Land Management, Fish and Wildlife Service, Forest Service, and National Park Service.

Some 400 people from all over the United States, representing the above organizations and many other groups and agencies too numerous to mention, were present at the discussion sessions.

This conference, like the four preceding ones, was aimed at working toward a sane, practical and adequate policy for managing and perpetuating the wild and wilderness areas of the nation, particularly those areas now in public ownership.

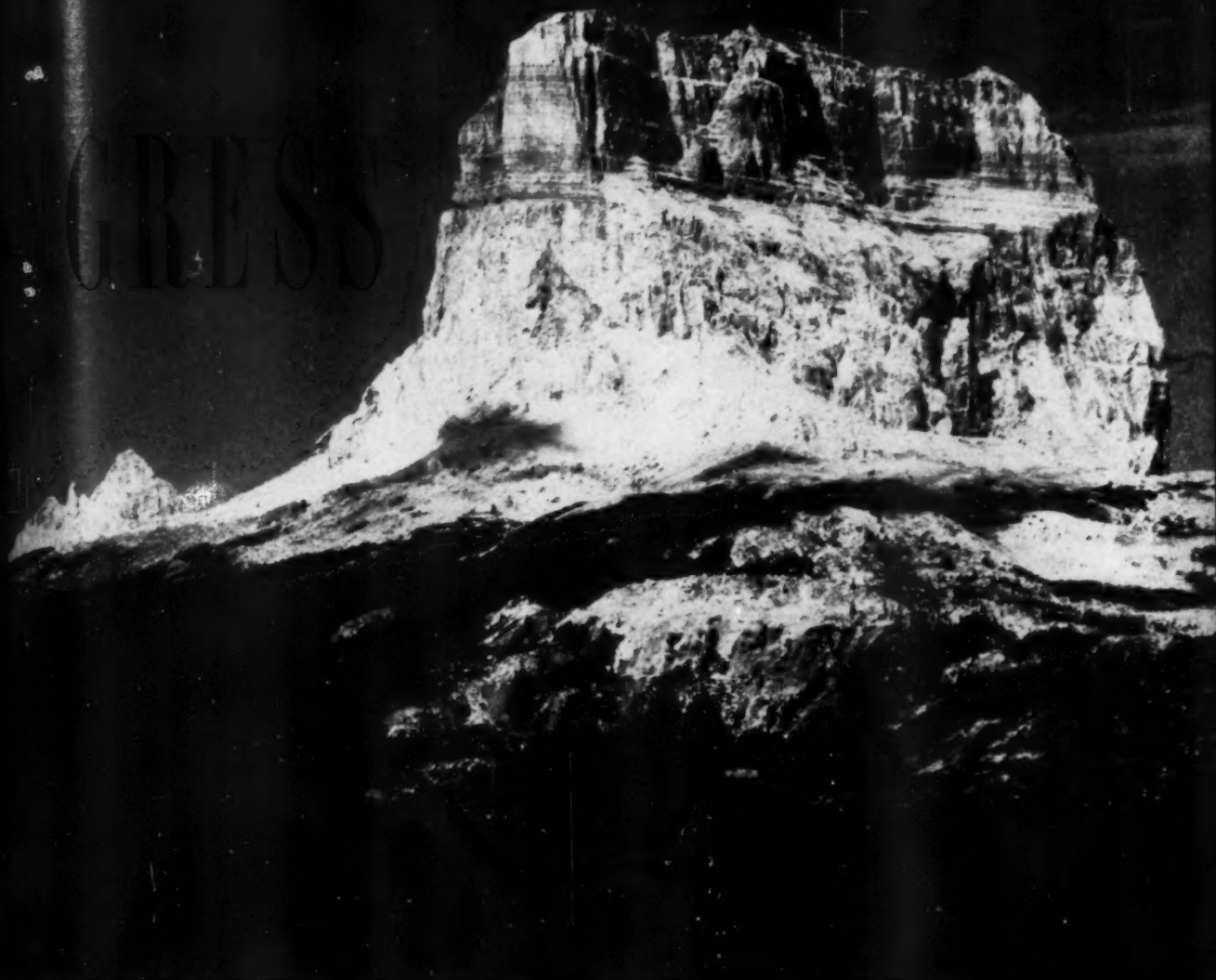
David R. Brower, Executive Director of the Sierra Club, opened the discussions by saying in part, "How much right does one generation have to another generation's freedom? Can we of this generation,

in conscience, pay for our freedom by mortgaging the freedom of our children?

"This generation is speedily using up, beyond recall, a very important right that belongs to future generations—the right to have wild lands in their civilization, even as we have them in ours; the right to find solitude somewhere; the right to see, and enjoy, and be inspired and renewed, somewhere, by those places where the hand of God has not been obscured by the industry of man.

"No group is more concerned with the preservation of this right, as it pertains to the most beautiful sample of original America, than are you who assemble here. Your lead-

# GRESS



## Fifth Biennial Wilderness Congress, San Francisco, California, March 15 and 16, 1957

ership will determine the fate of that right, so far as people of our time can pass opportunity along to our sons. Apathy here can mean that we pass them a dead torch. Or we can keep it aflame, knowing that this is a very special torch that man cannot light again."

Lowell Sumner, a biologist for the National Park Service, gave an interesting and thought-provoking analogy between the life of a beavers' colony and a human community. He showed how the pressures for food developed by an over-populated colony can destroy the food supply and ultimately destroy the colony itself. Talking of human populations, he said, "Three situations—

*more stress*—are three interrelated phases of a single developing situation, the population increase. Let us consider how they add up to what are commonly called 'the pressures of civilization.'

"Every day there are one hundred thousand more people in the world than there were the day before. That is four thousand more people every hour. Every day there are in the United States seven thousand more mouths to feed than yesterday. Today the world population is over 2½ billion; authorities foresee a rise by the year 2,000 to nearly five billion.

"In 1955 an international symposium of seventy scientists attempted the first large-scale evaluation of

'Man's Role in Changing the Face of the Earth.' They produced 1,200 pages of staggering evidence that the results of man's activities are now comparable in magnitude to those of major climatic, ecologic and geologic forces.

"Man brought about profound changes in forests, grasslands, wetlands, and tundra; in streams and coastlines; in soils and mineral resources. Even the earth's atmosphere has been altered—by the consumption of coal, petroleum and other fossil fuels which have raised the carbon dioxide content of the air by 10% in the last century—possibly with long range effects on the earth's climate and eventually even on the chemistry of the ocean.



"A biologist sees the human population increase as essentially like the population increases of other forms of life. All of them are subject to the same fundamental biological laws governing the availability and rate of use of raw materials. We humans may forget these natural laws, or postpone their consequences by complicated stratagems, but in the end we cannot repeal them any more than we can alter the motion of the earth."

Dr. A. Starker Leopold, of the University of California, gave a stimulating discussion of "Wilderness and the Humanities." It is unfortunately impossible to repeat the very interesting background material given by Leopold in a boiled-down review. The hard core of his presentation is that, "Man has conquered wilderness and in doing so has developed culture. Observation and study of natural phenomena eventually achieved intellectual status. The philosophy of man's relation to nature is very recent. There is great difference between managing nature—as in a botanical garden—and a deep respect for nature. The national park's idea of preserving nature undisturbed is an expression of that respect which appeared as suddenly in the accepted mores of this country, as a biological mutation. Many nations have adopted it. We were still conquering nature when in 1872 we were determined to preserve some of it unchanged. The original idea was the preservation of spectacular geological phenomena. It expanded to save the Big Trees and later animal life. The idea of zoning evolved still later. Along with the national parks came wildlife refuges, the forest wild areas, state and metropolitan parks—all expressions of the same basic idea. Motivation for this trend the reverse of conquest is the moral conviction that it is right to preserve some areas of the good earth—a new ethical idea superimposed on the time honored drive to conquer. It marks a new epoch in history, and is sound ground for optimism for the future."

Considerable time was devoted to discussion of "What's Left of Our Scenic Open Spaces."

Harold S. Wagner of the Metropolitan Park Board of Akron, Ohio, discussed scenic areas under municipal, county, and state control. The job of preserving these areas under present conditions seems to be pretty well understood. The main difficulty will be to preserve these natural

landscapes from destruction as the population increases.

Joe Penfold, Western Director for the Izaak Walton League, discussed scenic areas from the national standpoint. Penfold pointed out that there is as yet no generally accepted definition of scenic open spaces. Further, no adequate inventory of existing scenic open spaces has been made on the basis of any common standard. He maintains that scenic resources and their uses cannot be independent of all other resources. Trends clearly indicate that technical advances in resource management being applied to so-called wild lands will, before too long, give the wild lands characteristics much more like those of cultivated lands, whether the objective be grass for livestock, forage for deer, optimum yield of timber products, optimum water production or what not. These developments made possible by efficiently applying scientific knowledge to resource management have resulted from our attempts to satisfy the obvious demands of people.

These pressures and trends are basic to any adequate understanding of our scenic open spaces and how they fit into the overall pattern of land, water and resource use.

Penfold is encouraged by the fact that the problems associated with the future use of the scenic spaces are attracting sufficient public interest to result in serious legislative proposals. He feels that the details of such proposals are less important than the fact they demonstrate a growing awareness of the people that we must work for an adequate solution before it is too late.

Lee M. Talbot from the University of California described graphically the wilderness situation in other countries. Apparently the United States has developed an appreciation of wilderness values much earlier than other nations, and is the pioneer and leader in developing a modern-day wilderness policy.

The principal federal land managing agencies each discussed the wilderness idea as it affects their individual agency problems.

Mr. Edward Woolley, Director of the Bureau of Land Management, explained in considerable detail the responsibilities of his agency. He stated that B.L.M. does not have any areas which it manages specifically as wild areas. He brought out the point that many areas of public domain lands have already been included in wilderness areas and transferred to other agencies for ad-

ministration by the latter. He brought out the desirability of classifying and inventorying of public domain lands for their highest apparent future use. He also discussed the development of recreation facilities on suitable public land sites in Alaska for eventual transfer to the territory.

Don C. Foster, Area Director of Indian Affairs, discussed Indian lands. He mentioned that this agency, unlike the other federal agencies, does not manage public lands. The lands are all privately owned, either by individual Indians or by tribal groups. The principal problem of the Indian Bureau is that the population of Indians has outgrown available land resources. There are some Indian lands of generally low economic value which could well be incorporated in a national wilderness system. However, as these lands are private property, Mr. Foster states that they should not be set aside for wilderness purposes unless (1) The Indian owners approve of such action or, (2) The Indian owners are fully and fairly compensated for the loss of all values that may be involved.

Daniel H. Janzen, Director, Bureau of Sports Fisheries and Wildlife, mentioned the many wildlife refuges managed by the Fish and Wildlife Service. Some of these, involving certain birds and animals, must of necessity be maintained in undisturbed areas out of contact with human beings.

Other refuges are managed to produce fish and game for human recreational use and are not pure wilderness areas. Wildlife refuges serve as reservoirs of game birds and animals, from which the animals and birds move out into surrounding areas and are available for human recreation.

R. E. McArdle, Chief of the Forest Service, presented a succinct and forthright statement of the policies and programs of the U. S. Forest Service. He said in part, "The Department of Agriculture has recognized the desirability of protecting and preserving wilderness for a long time—(the Gila Wilderness was established in 1924). We will continue to do so.

"The guiding principles of national forest management are multiple use and sustained yield of products and services for the greatest good of the greatest number in the long run, . . . all resources, all uses,

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# A Layman Looks at Natural Resources

By MRS. JOHN G. LEE,  
*President, League of Women Voters of the U. S.*



UNFAMILIAR words like hydrologic cycle, acre foot, design flood, watershed and multiple purpose project are slipping into the vocabulary of the League of Women Voters. Legislation such as the amended Water Pollution Control Act, Watershed Protection and Flood Prevention Act as amended, Small Reclamation Projects Act and Federal Flood Insurance Act, while perhaps not exactly household words, are a part of the vocabulary also of the league member.

The reason for this new vocabulary is that at its 1956 convention the members decided to put on the national program "Conservation: Study of Water Resources." We recognize, of course, the tremendous importance of all renewable and non-renewable resources. Although it is true that you should never underestimate the power of a woman, you must also realize that we are rational beings and as such felt that it was not within the realm of reasonableness to try to tackle all the national resources at once. It made more sense to concentrate on water, which sounded somewhat limiting. This turned out to be a fallacy, since water is a vastly complex subject on which all living things depend. Furthermore, government, in dealing with water, has succeeded in developing com-

plexities which only a Univac can untangle.

However, perhaps one reason the members of the League of Women Voters were so anxious to make a study of water resources is because they have an aversion to polygamy. Bernard Frank who might be here in the audience this afternoon, has written that even marriage might be influenced by the difficulties of obtaining water. The inhabitants of one rural community in southeastern Asia must walk nine miles to the nearest sources of drinking—a group of wells. Local custom decrees that wives must fetch the water. One wife can make only one trip a day with her bucket—not enough for the family's needs—and so a man finds it desirable to have several wives. It is a thought worthy of some consideration!

In leagues of many of our western states the members have been anxious for a long time that we tackle the problem of water. Fort Worth was wondering whether it would be out of water in five years. I happen to be from Connecticut and the grievous damage done by floods there in 1955 made me realize that higher food prices, depleted meat supplies, higher tax bills and less steel for school construction actually can be connected with raging waters; and, as a citizen, I

have a vital interest in the nation's powerful rivers and the way in which they are controlled.

I am not going to tell you about water. That would be bringing coals to Newcastle indeed, and I have been in that position myself. As president of the League of Women Voters presumably I am aware of the importance of voting, but some years ago I posed for a publicity picture with an orchestra leader who had just recorded a stirring number called "Voters on Parade." After posing for several pictures this man turned to me and with the air of one making a most profound discovery he said very sincerely: "Mrs. Lee, I think voting is terribly important. I think everyone should vote." He looked as if he expected me to challenge this novel and startling sentiment, but all I could do was to agree as if I'd never run across the idea before.

So, I am not going to tell you about water. But it is possible that you have been so aware of America's water problems for such a long time that you have forgotten the impressions you first had when you entered the field. I'd like to give you a few of mine along with some of the questions that have come to mind as a result of a first look into this vast problem. Then I'd like to go from there  
(Turn to page 46)

By ARTHUR H. CARHART

# YOUR CABIN'S ROOF

**C**ABINS and cowboys have one trait in common. Give a real cowhand a good "roof" in the form of a high-grade range hat and a pair of first-class boots, and he's dressed up, just as if between these two items he is wearing a range-worn denim. Put a good roof on a cabin, a sound foundation under it, and it also will be well fortified against weather and wear.

I know from experience, that one is more likely to muff the job of putting on a staunch roof than building on a solid foundation. The problems of a roof functioning properly hit us, smack in the face the season we returned to our mountain place after it had been closed all winter, and found that our absolutely new roof had leaked bucketsful of water.

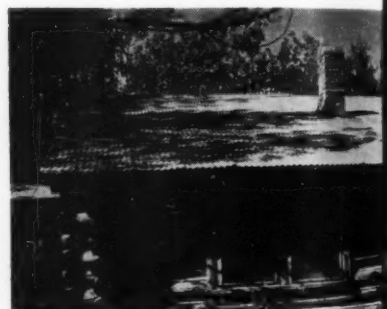
A half dozen wall board panels were damp and stained; they still were moist two weeks after snow had disappeared from the big hills.

We had built a new wing to the house. Gunnar, our Norwegian ranch-owning neighbor, who can build anything from a hay stacker to a wall cabinet, had warned against just such leakage. One of his ranches is in a high valley where snow is



Sheathing over which composition is to be laid must be placed edge-to-edge. Native lumber is used here

There are various types of composition shingles, but this roof has the lighter weight, hexagon-type



A year-round residence at Jackson Hole has corrugated iron roofing



A straight roof without angles can handle a snow load better than the roof that has valleys between wings



deep each winter, and he'd been through the mill.

"We put a big, double layer of roofing underneath," he said as we laid the composition roofing at the "valley" where the new wing joined the older part of the house. "We make it plenty wide."

Though we had done just that, we hadn't laid the roofing out far enough under the shingles on the old part of the building, and here's what had happened.

Snow had blown in deep in that valley between two sections of the house. A few warm days had come along, snow had melted, the outside face of the drift being exposed had frozen and formed a tight dam. That ice facing hadn't melted fast enough to let water drain through; snow-melt had backed up in the valley, and far enough on either side so it overflowed under the composition shingles on the old part of our house. It literally had poured down to dam-

age the walls and ceiling in one corner of our living room.

You have a bit different situation to deal with in a back-country cabin used only in the summer than in a town house. Even with fair insulation of ceilings, your town house has some heat under the roof to clear snow between storms. The town place usually is more protected so the sun will melt snow away. You're on hand, too, if there is a

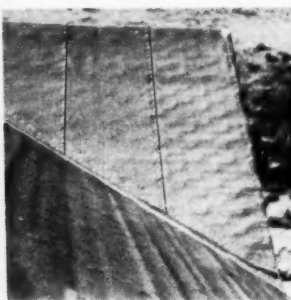
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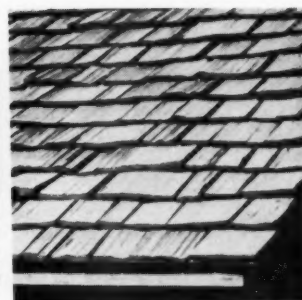
A roof of high-grade composition shingles and seal around vent



In the "Pioneer" type of cabin roof, boards are laid eave-to-ridge



Ice dam formed in this "valley" backing snow-melt under shingles



This particular type is a shook roof, which is attractive and durable

Tree farm owner (r.) shows inspecting forester the 14 year old white pine reproduction in his oak stand



Peeled "popple" pulpwood shown being unloaded by lift truck in yard



## A Marketing Information

By Harry S. Mosebrook,  
Forester,  
American Pulpwood Association

**I**N the February issue of *AMERICAN FORESTS*, Richard M. Brett, retired businessman turned conservationist, offered his "Woodlot Primer" for the benefits of those owners who are ready to begin woodland forestry but do not know exactly where to start. This article is intended to *begin where Mr. Brett left off*, by offering the woodlot owner ideas that will enable him to bridge the gap between growing his forest and selling its products to his best financial advantage. This is talk that the woodland owner will understand and appreciate because it helps to put cash into his pocket. This marketing information primer will not presume to tell the tree farmer where to sell his products, or how much he should get for them; but it will give him some idea about where he can go to get such information when he is ready for it.

If the woodlot owner will use the following suggestions in marketing his stumpage or cut products, he will realize the maximum income:

- 1) *Study the species, the quality and the quantity of timber on your land.* (Refer to "A Woodlot Primer" in February, 1957, *American Forests*.)

Know *what* to cut.

Know *when* to cut.

Know *how* to cut.

Know *where* to get information or assistance if you need it.

- 2) *Locate the markets.*

Consult your neighbor, county agent, or local forester and use their experience.

Contact buyers or mills for their needs, specifications and prices.

Obtain prices or bids from more than one source.

Make sure a demand exists for your products.

Consider financial advantages of selling as standing timber vs. selling as products.

- 3) *Obtain a definite contract before you cut.*

Get a written contract covering quantity, quality, price and specifications.

Make sure you, as well as the purchaser, live up to the contract.

Ever since the small woodland owner has been identified as the "problem area in American forestry," every government forestry agency and many legislators have extended every effort to find ways to help him. Industry, too, has offered the hand of a big brother to these small woodland owners through the tree farm and tree farm family idea and through direct assistance by industrial conservation foresters with the secure knowledge



that every dollar spent in this way eventually comes back in the form of increased wood supplies. With all these programs, no one had taken the time to find out just what was available to woodlot owners on a nationwide basis by way of marketing assistance and information to help him convert his woods into cash crops.

Last year the Forest Industries Council, the policy-coordinating organization of the pulpwood, pulp and paper, and lumber industries, decided to find out exactly what marketing information was available to the small owner if he wanted it. The Forest Industries furnish the markets for most of the products grown in small woodlots and without them woodlot forestry would be only a means without an end. The results of this nationwide survey, published in a bulletin "Marketing Information Available to Forest Owners," reveal that there is a wealth of marketing information on the local, state, and industry level where it is most meaningful. Hundreds of price lists, specifications, and bulletins are published by wood-buying industries and by virtually every forestry agency in every state, with the exception of the

Prospective Tree Farmer Reino Wentto (l.), looks over plans with Mando forester Howard Post (r.)



# Primer for Woodlot Owners

Suggestions presented in this "Primer" will enable the woodlot owner to more easily bridge the gap between growing his forest and selling its various products to his best financial advantage



# Even where timber gets smaller...



Slope-shedding maneuverability of TD-24 cutting new trail for Hopkes is result of International's exclusive Planet-Power steering. "Live" power and traction on both tracks gives added operating ease, safety, and work capacity...another big International machine bonus.

## Hopkes Logging Co., proves it hauling out 910,000 bf second-growth in six days!

"We are getting more second growth timber all the time," says George Hopkes, owner of Hopkes Logging Co., Newport Oregon. "But even though these logs are getting smaller, our profits are getting bigger...thanks to our two International TD-24 tractors and one TD-18."

Hopkes is logging in the Drift Creek area, south of Toledo. The slopes here average 50%, or steeper (see illustration, right), yet he averages over 125,000 board feet daily. *During a recent six-day period the three International tractors hauled out 910,000 board feet!*

"We need the big TD-24's, though our second-growth timber here is small. Even on very steep mountainsides, the big TD-24's save time punching trails to gather the logs fast," continues Hopkes. "Then they come out and up the steep grades with a good load without slowing down. They get around better than other machines and will out-climb and out-work any other tractor in these mountains."

His International crawlers also saves Hopkes real repair and maintenance money. The 5-year-old TD-24, with more than 4,000 hours, has averaged less than \$1,000 per year for repairs. *The 4-year-old TD-18, has more than 3,000 hours, with no repairs of any kind.*

To profitably log any-sized timber, consider these time-gaining, production-boosting, cost-cutting TD-24 advantages: exclusive Planet-Power steering with full-time "live" power on both tracks; cycle-speeding, on-the-go shifting; genuine in-seat, seconds-fast, all-weather International diesel starting; long-lasting Cerametallic engine clutch efficiency. See your International Construction Equipment Distributor for a demonstration!



Hopkes "small" logs represent big hauling problem over average 50% slopes (see right). But TD-24 instant fingertip Hi-Lo shifting helps speed cycle to landing and return...also cuts operator effort.

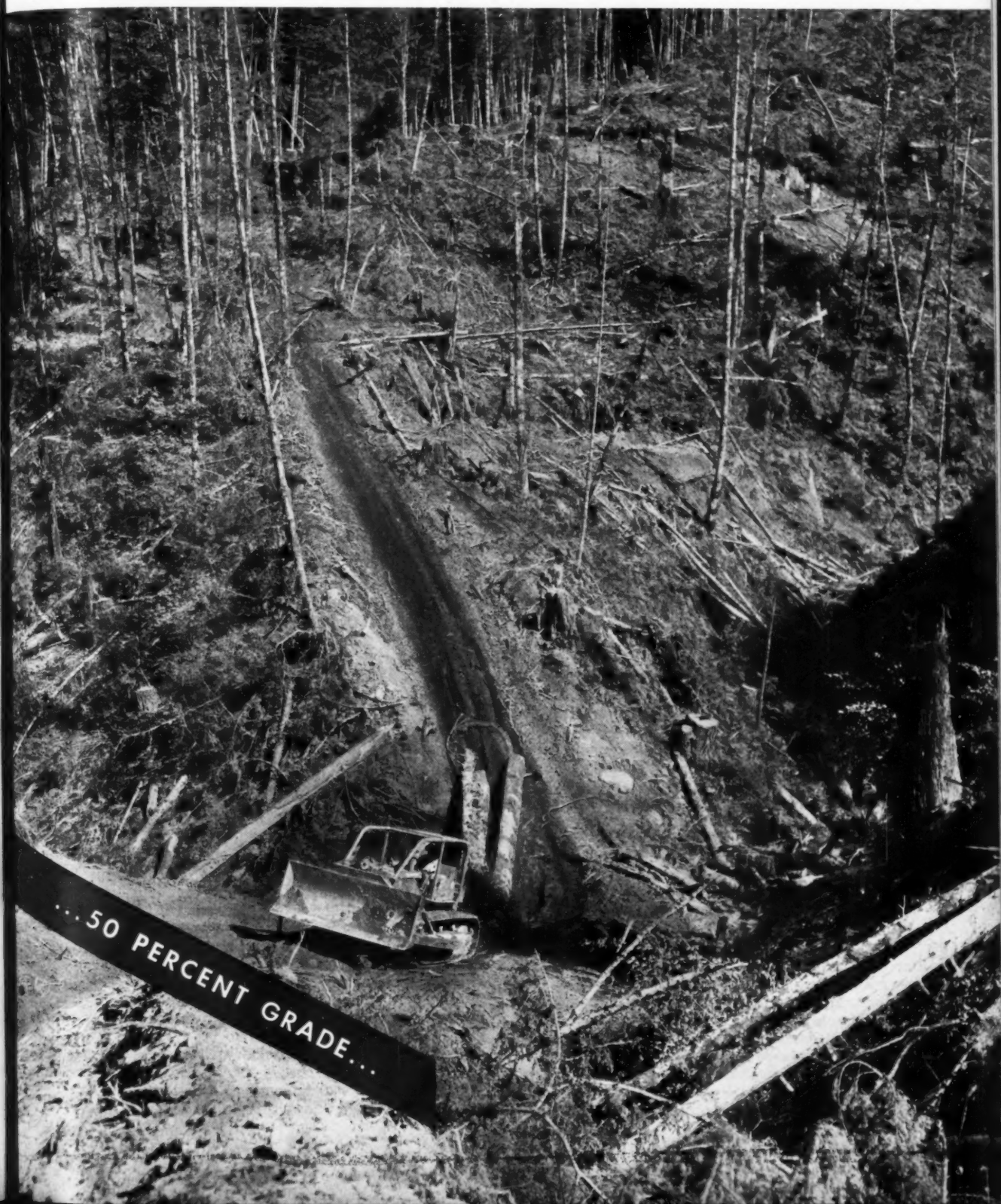


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CONSTRUCTION  
EQUIPMENT**

International Harvester Co., 180 N. Michigan Avenue, Chicago 1, Illinois

A COMPLETE POWER PACKAGE: Crawler and Wheel Tractors... Self-Propelled Scrapers... Crawler and Rubber-Tired Loaders... Off-Highway Haulers... Diesel and Carbureted Engines... Motor Trucks... Farm Tractors and Equipment.

...profits get bigger with a TD-24!



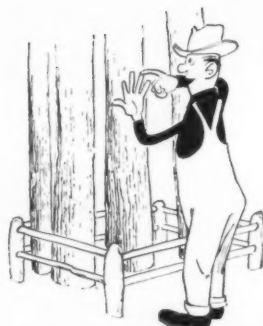




"YOUR 'FORGOTTEN ACRES'..."



"...TREES WILL GROW FASTER AND BETTER IF THEY ARE TREATED AS A CROP."



"TAKING STOCK IN THE WOODLOT MAY SEEM TOO MUCH TROUBLE ... BUT IT REALLY ISN'T."



"... SEEK THE ADVICE OF AN EXPERIENCED FORESTER..."

states of Arizona, Nevada, and New Mexico. It is significant that the acreage of small privately owned woodlands in these three states is very small.

But marketing help is not confined alone to published material, for over 2000 public agency foresters are directly responsible for giving the woodland owner in-the-woods advice, and over 1000 industry-employed foresters are available either part or full time to offer him advice on growing and harvesting his tree crop. Another 264 private consulting foresters by actual count have indicated that they will give tailor-made advice and render any service the owner wishes at a fee commensurate with the service rendered. These personnel are available in every state; and if the woodland owner does not know where to find such help, the easiest thing to do is to inquire of his local wood-using plant, his county agent, state forestry office, or soil conservation district office. A glance at the chart "Forest Owners Guide to Marketing Information" will give you the addresses of some of these sources in your state.

In most forested regions there are forestry cooperatives, and state and regional forestry associations which provide various types of services and information. Probably the most important thing is to get acquainted with the wood-buying industries or dealers in forest products to learn first hand of market conditions, prices and specifications. Many wood-buying mills have buyers in the field all the time. A comparison of prices and information from two or more buyers will give the owner some basis for a choice to his best financial advantage. Nothing can ever beat such a first-hand exchange of prices and specifications directly between buyers and sellers.

Although federal agencies provide marketing information and research and field personnel, forest products marketing programs for woodland owners are primarily the responsibility of state agencies working closely with both buyers and sellers to develop the type of program that fits the needs of a particular state. The individual services that are a part of such a marketing program developed on a state and local level fill the needs of the woodlot owner for the information and help he wants to market his forest products most advantageously. In most states marketing programs appear to have been developed as the need for them has been demonstrated.

Perhaps it will be most helpful to review the types of marketing information which the survey found to be available to tree farmers. The most frequent type of marketing information is a *directory or list of buyers* of forest products and stumpage. This type of informa-

tion is widely published in 37 states; and although the reports vary somewhat due to local needs, most of them are broken down into commodity products and state areas. Frequently such directories contain other useful information as well. Most of them are brought up to date periodically, some as often as once a year. In 28 states they are published by a state agency, either the state forester or state extension college; in 4 states they are a cooperative state-federal project; in 3 states they are published by a private organization; in 1 state as a cooperative state-private project, and in only 1 state by a single federal agency.

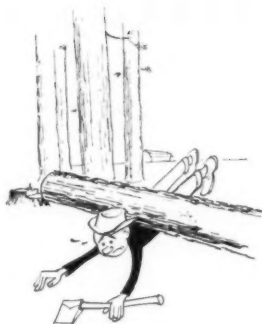
*Periodic reviews of market demand and supply, and price trends* are another important market service for woodlot owners. This information is available in 23 states and in many states is given the widest possible type of dissemination by county agents, printed in newspapers, and carried regularly on radio and television, and featured regularly in trade magazines. The chief value of these reports is to indicate trends in prices and markets which enable the producer to choose his best market time. In the case of forest products, fortunately, the timber can be left standing on the stump an extra year or two until the market is just right. Market and price trend reports are issued by state agencies in 18 states, in 2 states as a cooperative federal-state project, in 1 state by a citizens organization, and in 2 states by federal agencies.

*Marketing bulletins* of great variety and content offer the landowner the best available advice and hints on how to grow a forest crop and how to harvest and market that crop most profitably. Many of them are well prepared and merit careful study. Among the subject-matter covered in these bulletins are methods of selling standing timber; timber sale contracts; how to get bids; methods of payment; product grades; and comparative advantages of selling standing timber vs. selling products. These bulletins are an important part of a marketing program and often will give the woodlot owner as much information as he needs or is willing to use when he cannot get first-hand and personal advice from the sources available to him. Many of these bulletins are issued by the wood-buying industries specifically to assist the forest owner from whom they purchase wood. Others are issued by state forestry agencies, and a number are issued by federal agencies for use on a national or regional basis. Magazines such as *AMERICAN FORESTS* carry periodic articles that serve to provide their readers a wealth of useful information as

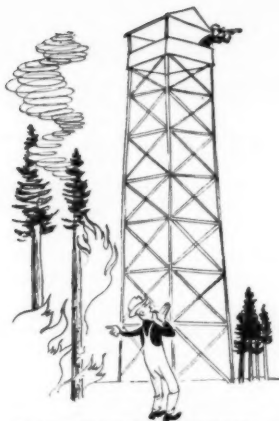




"...TREE FARMERS NEED TO  
KEEP IN TOUCH WITH...  
TIMBER BUYERS..."



"SPECIAL SKILLS ARE REQUIRED."



"...CONSULT WITH THE NEAREST  
FOREST FIRE PROTECTION AGENCY..."



"...IT SHOULD BE PROTECTED  
FROM DRYING AND HEATING..."

a guide to marketing practices. Marketing bulletins are available in all but 3 states.

**Personal advice** is the best type of marketing service the woodlot owner can receive. All of the printed material in the world will never be as valuable to him as on-the-ground advice from qualified personnel concerning good harvesting and marketing practices for the particular conditions in his own woodlot or marketing area. Private consulting foresters are playing an increasingly important role in furnishing advice and direct assistance to owners. State and federal foresters working with landowners cannot devote as much time to a single owner as he may desire or need. The consulting or private industry forester can step in to fill this gap by providing the forest owner the additional technical assistance he desires to develop a good marketing program. Personnel to assist owners in marketing are available in every state.

**Price reporting** is the fifth feature of a forest products marketing service for woodland owners. It is not needed at all if the other features of a marketing service are ample. Price reports are of two types: One type which reports the price of stumpage (timber standing in the woods), and one which reports prices for forest products delivered to roadside or to mill. Price reports on stumpage cannot be very reliable when applied to a local area since they cannot accurately report such variable factors as size of tract, logging conditions, quality of timber, or distance from market. Price reports for forest products can be more useful if prepared on a local or state level with the cooperation of both buyers and sellers. Both types of price reports are ineffective to the extent that they do not and cannot show that specific buyers are in the market for forest products or that there is any demand for a particular product at a particular time.

There is so much competition for wood today in every form that the seller of forest products can usually get current price information from more than one buyer in order to make comparisons. Wood-buying mills publish prices locally on bulletin boards, in circulars, newspapers, and by word of mouth to anyone inquiring. There is no secret about what prices are being paid, but price reports which show averages of past transactions may be more confusing than helpful since they cannot show local conditions. Although the survey showed that price reports for various forest products are available in 20 states with the cooperation of buyers and sellers, the

woodlot owner cannot rely completely on the applicability of the prices quoted.

Only the states of Illinois and Louisiana now have forest products price reports issued by a federal agency on a state basis. In these states the U. S. D. A. Agricultural Marketing Service is cooperating with state organizations in providing a quarterly reporting of average prices paid producers and dealers for specific products. On a regional basis the Agricultural Marketing Service maintains a Market News Office at Savannah, Georgia, which makes complete market and price reports on naval stores.

The Forest Industries Council Survey found numerous examples of outstanding forest products marketing programs in a number of states. In each of these successful programs, it was readily apparent that a very necessary ingredient was close cooperation between the state agencies and both buyers and sellers of forest products. Although a number of states could be used as examples, a review of three different types of programs in three widely separated states—North Carolina, Minnesota, and California—illustrates the interest on the state level in providing marketing programs of value to the small woodland owner.

The North Carolina forestry marketing extension project at State College Station, Raleigh, N. C., started only last year, but L. H. Hobbs a full-time forestry marketing specialist in the State Extension Service reports, "We have made some progress and still have a long way to go to make this program as significant and effective as we feel it can be." That the program has already made some progress is evidenced by the scope of the major program activities that have been started:

- 1) A "Tarheel Timber Market" monthly news letter now goes to about 3300 persons. At least 50 raw material buyers furnish monthly information on inventories, need for materials, prices paid during the month for raw products, and prices received from products they manufacture, and their estimate of the condition of the market.
- 2) **Development of cash log markets.** Since North Carolina is a small woodland owner state, a central yard system to which owners can sell truckloads of logs on well-publicized price, measurement and grading systems, is planned. Also under consideration is a plan for establishing a roadside pick-up system so dealers can buy logs from farmers who can cut and skid them to roadside but do not have hauling equipment.

# YOU CAN OBTAIN MARKETING INFORMATION FROM THESE NATIONAL AND REGIONAL ORGANIZATIONS

ORGANIZATION	INFORMATION
The American Forestry Association 919 Seventeenth Street, N. W., Washington 6, D. C.	1. AMERICAN FORESTS magazine.
American Forest Products Industries 1816 N Street, N. W., Washington, D. C.	1. Information on Tree Farming. 2. General information about lumber, pulpwood and pulp and paper industries.
Association of Consulting Foresters 415 Olympia Building, Miami, Florida	1. Names, addresses and services performed by consulting foresters.
American Pulpwood Association 220 E. 42nd Street, New York 17, New York	1. Lists of pulpwood consuming pulp and paper mills in each state. 2. General information about pulpwood industry.
Forest Farmers Association 66 Eleventh Street, N. E., Atlanta, Georgia	1. Publishes a magazine <i>The Forest Farmer</i> which contains articles on marketing. 2. Publishes an annual <i>The Forest Farmer Manual</i> which in 1957 will contain a section on marketing, and a list of major pulp and lumber companies. 3. General information about forestry marketing in the South.
Industrial Forestry Association 1410 S. W. Morrison Street, Portland 5, Oregon	1. Services of professional foresters available to forest landowners in Douglas-fir region. 2. Provides information on timber growing, harvesting and utilization.
National Lumber Manufacturers Association (and Regional Lumber Associations) 1319 Eighteenth St., N. W., Washington, D. C.	1. Provides general information on lumber industry. 2. Addresses of regional lumber associations.
New England Forestry Foundation 3 Joy Street, Boston, Massachusetts	1. Performs all types of management services for forest landowners in New England for fee. 2. Knowledge of markets and experience available to clients.
Northeastern Wood Utilization Council Box 1577, New Haven 6, Connecticut	1. Publishes bulletins on utilization of low-grade wood and wood waste. 2. Conducts conferences in utilization and markets for forest products.
Society of American Foresters Mills Building, 17th & Pennsylvania Ave., N. W. Washington, D. C.	1. Names, addresses and services of consulting foresters in each state.
Southern Pulpwood Conservation Association 1224 Peachtree Street, Atlanta 9, Georgia	1. Provides educational material relating to tree growing and harvesting. 2. Provides direct management advice through conservation foresters employed by pulp and paper companies in South.
Timber Producers Association of Minnesota 516 Lyceum Building, Duluth, Minnesota	1. Publishes a monthly bulletin containing information on forestry practices, marketing practices and markets. 2. Publishes "Market Hints." 3. Lists of buyers.
Timber Producers Association of Upper Michigan and Wisconsin Ironwood, Michigan	1. Publishes a monthly bulletin containing marketing and market information. 2. Lists of buyers.
Woodland Products, Inc. c/o Brandywine Valley Association Delaware Trust Building Wilmington, Delaware	1. A cooperative providing marketing assistance to members. Membership available to woodland owners in Brandywine Valley.

Data compiled by : The American Pulpwood Association

- 3) **Market outlet information.** The first goal is to publish a bulletin "Hardwood Marketing Opportunities in eastern North Carolina" which will list by species the various products now being purchased, the specifications for each product, locations of buyers and buying practices being followed.
- 4) **Buying pulpwood by weight.** The North Carolina Forestry Association is presently cooperating with the North Carolina Department of Agriculture in drawing up a bill for the state legislature which will make changes in pulpwood marketing regulations so

as to permit buying of pulpwood by weight. If this system is adopted, the Extension Department will develop an educational program for the benefit of both buyers and sellers of pulpwood.

- 5) **Sales procedure and timber sale contract information.** A leaflet is in preparation which will outline the major provisions which should be included in a timber sales agreement. This will be available to landowners for their guidance as well as for foresters, lawyers and consultants who are advising landowners on timber marketing.

This program in North Carolina is just getting underway but is being tailor-made for the needs of the timberland owners of that state. Eventually an advisory and planning group made up of representatives of the wood products industries will evaluate and work closely with this program.

Now let's look to the other side of the country—to California—where a different approach has been adopted in order to coordinate the work done with small landowners. In June, 1952, Dean F. S. Baker of the School of Forestry and Woodbridge Metcalf, Extension Forester, decided that a more unified approach in helping the woodlot owner was necessary, and these two men formed the Small Woodlands Council. The members of the council are all the agencies and organizations which have an interest in working with woodlot owners, and include the School of Forestry, Extension Service, Division of Forestry, Western Pine Association, California Redwood Association, American Forest Products Industries, Soil Conservation Service, and Bureau of Indian Affairs. The purpose of the council, simply stated, is to promote good management and continuous production of the small forest holdings in California.

The Small Woodlands Council today under the Chairmanship of Dean Henry Vaux of the School of Forestry, is providing small woodland owners with concise and up-to-date technical and general information on many phases of woodland management and marketing. "Timber Tips" is a regular issue news letter which covers a wide field of subjects including planting, growing, harvesting, and marketing of tree crops. Much useful information is released to local newspapers so that it will come to the attention of timber owners.

The most monumental task to date has been the issuing of a marketing bulletin, "Markets for Woodland Products in California." Although the report is intended primarily for use of advisors and foresters working with woodland owners on marketing of forest products, its information can be used directly by owners. It provides these types of information: (1) price information—regional average prices and price ranges for each forest product commodity; (2) buyer information—buyers are listed for each commodity by regions; and (3) product specifications—minimum specifications for each woodland commodity. The bulletin offers the essential advice that the "seller should contact the buyer before cutting or delivering any products." It is also desirable that the seller should have a firm commitment from a buyer as to volume, price, specifications, and delivery period of products to be cut before he actually cuts.

The California Small Woodlands Council does much more than prepare literature. It conducts field trips in order to show landowners good management and marketing practices. California as a state seems well aware of its opportunities in dealing with small woodlot owners, and all of its state forestry agencies and industry organizations are making maximum use of cooperative action. The council is young as organizations go, but other states would do well to keep an eye on this organization. The School of Forestry has just begun a two-year research project on marketing products from small woodlands, which will provide additional information.

Minnesota, the third example of a forest products marketing program, is located in the heart of a highly productive forest region where the forest industries are an important part of the overall economy. In this state, as in North Carolina and California, a large portion of the

forest material comes from privately owned woodlands. Minnesota has developed another method of accomplishing close cooperation between all interested parties in dealing with small landowners. This is done through a Minnesota Forest Products Marketing Information Committee. Its chairman is Ronald Beazley of the School of Forestry at St. Paul, who has put together a committee made up of representatives of state and federal forestry agencies, representatives of forest industries and industry associations like the Minnesota Timber Producers Association, the Department of Business Development, and the State Federal Crop Reporting Service, a widely diversified group of 16 men, but all interested in helping the small forest landowner.

The full committee functions through subcommittees which study problems and proposed projects in detail in order to make specific recommendations. These subcommittees are: (1) *Price and Quantity Information*, dealing with outlook and price situation; (2) *Forest Products Buyers*, dealing with information about buyers. A Directory of Primary Wood Using Industries is already published by the Office of Iron Range Resources and Rehabilitation; (3) *General Market Information*, deals with the customs of buyers and sellers of forest products. The Minnesota Forest Industries Information Committee has just issued a bulletin which offers very practical marketing information to the woodlot owner. The Timber Producers Association regularly publishes market hints and conditions in its monthly magazine.

With the counsel and advice of the Marketing Committee, the School of Forestry at the University of Minnesota has begun a study which will eventually provide basic information for the Marketing Committee. The project, which is entitled "Marketing Practices and Price Information in North Central Farm Woodland Product Sales," is sponsored by the Northcentral Agricultural Experiment Stations and is similar to a woodland marketing study nearing completion in the Northeast and to one being planned for the Western states. Its purpose is to learn how farm woodland marketing is conducted at the farmer level. It will study the factors affecting farmers' decisions to sell or not to sell, existing marketing practices and existing price-making methods. To obtain this information, questionnaires are being sent to a sample group of farmers and another to a sample group of first buyers located in northern Minnesota. Direct interviews with farmers in southern Minnesota will also yield additional information. The results will be published within a year.

The chief value of the cooperative approach that is inherently a part of the marketing program in North Carolina, California and Minnesota, although conducted in different ways, is best stated by the Chairman of the Minnesota Marketing Committee, Ronald Beazley, "All these different groups dealing with forestry problems of the small woodlot owners seem to distrust each other until they talk across the table, and then all the distrust after a while disappears."

What Minnesota, California and North Carolina are doing in developing marketing programs for the woodlot owner is being repeated in different ways in many other states. Each has its own approach to the problem, but in each case the final program that evolves is tailor-made to suit the particular needs of that state. The woodlot owner can get all the help he needs to market his products to his best financial advantage. It is up to him to use it.

(For State by State Marketing Information turn to next page)



# FOREST OWNERS GUIDE TO MARKETING INFORMATION

STATE	WHERE TO LOCATE THESE MARKETING SERVICE PERSONNEL:	WHERE TO GET THIS KIND OF MARKETING INFORMATION:
	<ul style="list-style-type: none"> <li>— Industry Conservation Foresters</li> <li>— Private Consulting Foresters</li> <li>— Farm Service Foresters</li> <li>— Soil Conservation Service Personnel</li> </ul>	<ul style="list-style-type: none"> <li>A—General Information</li> <li>B—Prices and Specifications</li> <li>C—Directory of Buyers</li> <li>D—Markets and Price Trends</li> <li>E—Marketing Hints and Advice</li> </ul>
ALABAMA	Your County Agent State Forester: 711 High St., Montgomery State Extension Forester or Soil Conservationist: Alabama Polytechnic Institute, Auburn	Wood-buying Industries (B, D, E) State Forester (A) Alabama Forest Products Association (C, E) 136 Catoma St., Montgomery
ARIZONA	Your County Agent State Land Commissioner: (No State Forester) Phoenix State Soil Conservationist: University of Arizona, Tucson 25	Wood-buying Industries (B, D, E) State Land Commissioner (A)
ARKANSAS	Your County Agent State Forester: P. O. Box 1940, Little Rock State Extension Forester: 421½ W. Capitol Ave., Little Rock	Wood-buying Industries (B, D, E) State Extension Forester (D) State Forester (A)
CALIFORNIA	Your County Agent State Forester: 301 State Office Building No. 1 Sacramento State Extension Forester: University of California, Berkeley	Wood-buying Industries (B, D, E) State Forester (A, C) State Extension Forester (B, C) California Small Woodland Council (A) Walter Mulford Hall University of California, Berkeley
COLORADO	Your County Agent State Forester: Capitol Building, Denver State Extension Forester: Colorado A. & M. College, Ft. Collins	Wood-buying Industries (B, D, E) State Extension Forester (A, D) State Forester (A) Colorado Forestry & Horticulture Assn. (E) 1355 Bannock Street, Denver 4
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## A Layman Looks at Natural Resources

(From page 31)

and suggest a few of the ways in which a lay organization such as the League of Women Voters may be able to contribute to solutions.

The first impression many of us get when we embark on a study of this country's water resources is the tremendous number of governmental agencies concerned in one way or another with water. I am told that there are 25 principal agencies in the federal government with a major concern in water resources and power and that 18 others are concerned to a lesser degree. All of this looks pretty confusing to a layman like me. So the first thing we have done in our league study is to assemble all this information on chart form. On it you can see at a glance, for example, that the Corps of Engineers is concerned with

flood control, irrigation, water supply, pollution control and recreation, while the Public Health Service is involved in only three functions to do with water—supply, pollution and recreation.

As soon as the national chart was issued, many of our state leagues started work on similar charts showing state agencies involved in water resource development and management and the way in which federal agencies concerned with resources are working in their area. They are trying to find out how the federal activities are coordinated with

state and local efforts or if they overlap and conflict with them.

The second thing we have observed is that there are not only many agencies involved but they seem to have different standards; they proceed in different ways and their experts do not always agree. I was also interested to learn that while some people who benefit from the government's water policies are expected to pay for them, others get benefits for nothing. Sometimes, I understand the same water to different users will vary in cost—the agricultural user one price, the domestic user another. This may be very clear to you but it is confusing to the layman. It makes us wonder whether it is possible to come to agreement even on basic scientific data—much less on a national water policy. But long years

*This article was an address given before the North American Wildlife Congress, March, 1957.*



of dealing exclusively in public affairs has developed in us a sort of hardy optimism.

The third thing we have learned is that our water problem is likely to cost us quite a lot of money. Those of us whose only previous contact with paying for water is when we make out checks for our semi-annual water bills have been startled to say the least to learn that about 50 billion dollars has been mentioned as the capital investment of the United States for use and control of water already and that up to 421 billion dollars has been suggested as the total of our water development financing. As taxpayers we may have a lot of questions to ask about that—maybe one for each billion.

The fourth observation I should like to make as a "newcomer" to this field is that all of the uses of a particular water source seem to be interrelated. You can stand out, for example, thinking you are going to study irrigation and end up learning about flood control, or you try to find out what constitutes a good water supply and find out that it can not be separated from the sewage disposal problem. Trying to separate the uses of water is harder than trying to allocate water itself.

The fifth thing we have noticed is the tremendous number of different groups that use water and the number that have ideas and opinions on the way water should be used. We notice, too, that all of these groups seem to have an angle. Now that is not necessarily bad; it is quite natural that each group of water users tries to identify its use as being in the public interest so that rules and regulations will favor them. What makes it confusing to the laymen—and possibly to you too—is when water uses that seem equally legitimate come into conflict. Usually we think of water as a pleasant cooling agent. We know, of course, that it is the source of steam; but we have been astonished to find it generating deep and hot emotional conflicts.

This brings me to one of the most important functions that can be performed by a disinterested citizen group. Laymen with no axe to grind can listen to the conflicting views of the pressure groups who want government agencies to come up with the "right" answer and then they can help to balance the special demands. They can do this, of course, only after they have learned the facts.

Paul Sears has said "public issues should not be clouded and confused by failure to get the basic scientific facts." I agree and I do not wish to imply that the League of Women Voters or any other lay group can get the basic scientific facts—that is up to the hydrologist, economist, geologist, engineer or water

law expert. But the league can—and so can any other interested group—use facts that have been available but about which no one has done much; it can assemble facts from various sources and put them together to make a more complete picture and it can prod the experts into making more facts available.

I'd like to outline for you, if I may, just how our group goes about getting the facts. As many of you know, New Jersey has had a water problem for years. In 1955, the New Jersey league started its study of water. Members were possibly stirred to action by the eloquent plea of the convention delegate who declared: "When the point comes that we have to ask, 'Is this bath neces-

sary?' it is time for New Jersey to take steps." They tackled the problem on a state wide basis. This is a copy of their kit. It goes into the history of the development of water supplies in New Jersey, an analysis of the supply problems in relation to population growth, fluctuation of use, agricultural, household and industrial needs, changes in climate and an analysis and comparison of the particular problems of the main geographic areas.

You would think perhaps that in a state like New Jersey where I understand they have been wrestling with the water problem for forty years, all of this information would be close at hand. Not at all. The most telling part of



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this kit, to my mind, is a note at the end. It says:

"It is almost impossible to give a bibliography of the source material used to compile the information in this kit. Speeches of experts in the water supply field, study commission reports of the past, material available from existing water supply agents and interviews with persons responsible for providing public potable water supplies are some of the sources used. The committee, however, has been very careful to have the enclosed information checked by responsible persons, particularly so since much of the printed source material was out of date or no longer of value."

Now, two years later the New Jersey leagues have not only made use of this kit, but the 83 local leagues in the state have studied the problem from a local point of view; they have taken innumerable field trips to innumerable local water works; they have considered the pros and cons of five possible types of development. The problem is clear; the solutions controversial.

Among the road blocks to progress were strong local opposition to suggested reservoir sites, conflicting engineering analyses of proposed water supplies, opposition of municipal and private water companies to the state's further entrance into the water picture, division of opinion as to who should pay for the new water supplies and south Jersey feeling its needs should also be considered. The League also discovered that water problems don't confine themselves neatly to the boundaries of a state. New Jersey has started to eye the Delaware River as a source of water supply because as they say "The Delaware River looks nice and big and doesn't rut through anyone's town or farm—except on occasions!"

However, they find that there are other eyes on the Delaware River. New York, Pennsylvania, Delaware, as well as New Jersey have interests in the Delaware River; New Jersey must receive permission from the United States Supreme Court before it can take additional water from the river, to mention a few of the difficulties standing in the way.

The league in New Jersey is now in the difficult process of making up its collective mind as to what next steps are the wise ones. It is evident that there are no easy solutions right around the corner. But eventually with enough people working on it and thinking about it and the development of better public understanding of what is involved needed solutions will be found, I am sure.

This brings me to a second role which a lay group can play in this complicated field, and that is the role of education

—informing the public so wise judgments can be made. I'd like to give you a rather homespun example:

Two or three years ago Chester, Vermont, population 1,981, had a problem of contaminated drinking water. Dr. Wayne Griffith, the town health officer had recommended that the water supply be chlorinated. Similar recommendations came from the State Health Department but the suggestion was defeated in a village vote. The league in Chester got interested in this matter. They found that samples of the Chester water supply should be sent to the State Board of Health twice a month, but this was not always done especially during the winter. So the league sent samples during January, February, and March. Of the eight samples sent, four came back marked "water unsafe for drinking."

The league also wrote other Vermont communities to find out how they had purified their water supply, to inquire about costs, how the money was raised and what people thought about chlorination. The replies to these letters were made part of an exhibition which also featured a "taste test exhibit." Various bottles of water chlorinated and unchlorinated were on display. Anyone who could successfully tell which bottles were which was awarded a prize. Two public meetings were held and then a petition was circulated to include the chlorination issue in the Warning for the Village Meeting. Usually a dozen or so people came to the meeting. But for the chlorination meeting there were 180 villagers present and they voted 91 to 67 for chlorination.

In these two examples, I have tried to demonstrate two of the ways citizen groups can function in the complicated field of water problems. In New Jersey the scientists got the facts, but the league assembled them from various sources and put them in a form where they were more easily understood. In Chester, the league took the facts to the public—small though that public was.

There is still another way in which a lay group can function and that is in the role of sparkplug. I am sure you are all familiar with the Brandywine Valley project. It is constantly being pointed out to us as the example of citizen action in improving a watershed. I have been told, however, that for years things in that valley were at a standstill. "Dead on their feet" is the way one expert expressed it—until the indomitable Mr. Hoff came along. He was the sparkplug. Providing the spark, it seems to me, is where interested laymen really shine. It is where citizen groups like the League of Women Voters shine, for certain.

Let me tell you about Salt Lake City for example.

In 1938, the United States Public Health Service first warned of the potential hazards in the Salt Lake City drinking water. Ten years later the same group declared the water definitely substandard and placed it on a "provisional" rating. This meant that unless the city immediately came up with a concrete plan for bringing the water up to standard, the use of the city's water by interstate carriers would be banned. There was no state or local law making it mandatory that the water supply meet safety standards and legislation setting standards of this kind had consistently been defeated.

In order to maintain the provisional rating the city government hired an engineering firm to survey the situation. Though the findings of that survey had been announced and reported in the local press, and though the state Medical Association had gone on record approving the recommendations, as had the state engineering council, there seemed to be little chance of raising the money necessary to improve the situation.

This was the situation in 1952 when the newly formed League of Women Voters decided that its first local program would be the "support of a soundly planned and financed water purification and sewage disposal system for Salt Lake City." Careful study was made of the findings and recommendations of the official survey. In addition, the league interviewed city officials, members of the medical association, heads of the city and state health departments. The information gained was reviewed and discussed by league members and agreement was reached on what would constitute an adequate program of water purification for Salt Lake City. It was now time for action in the community. It is good league strategy to get as many people as possible involved with the team before the starting whistle blows. Members of the staffs of both newspapers and of the state and city health departments attended meetings in unofficial capacities and a full-scale campaign to inform the public of the true facts about the city's drinking water was launched. The league's weekly radio program was devoted solely to discussions on water. Doctors explained the potential dangers of a sub-standard drinking supply; engineers described the various systems of water purification; health officials reported on the present supply; financial experts pointed out various methods of financing the expensive undertaking; city officials were interviewed as to their intentions. A town meeting was held at which the mayor came out for the first

time with a "pay as you go" proposal for financing the program.

The league now puts its speakers into action, and league members spoke and showed movies to all the groups that would receive them, several of whom joined the campaign.

In the meantime, the opposition became vocal. One powerful local group made a strong statement to the newspapers criticizing the "hysteria and frantic fear concerning the water supply." This particular group felt that to publicize and dramatize the condition of the water was bad business for the city. It would scare off tourists and conventions. The spokesman for this group called the league chairman and told her in effect that the league just didn't understand these things, that they were heading the city into fabulous debt unnecessarily, and they would be better off if they would just forget the whole business. Actually there were many members of this opposing group who disagreed with the official stand; they formed a committee to study the reports and surveys and eventually went along with the league's position.

More difficult to cope with at the time was the opposition from another source the Deer Creek Water Association. In a widely distributed leaflet, gotten out by the league in cooperation with the doctors and the engineers, it was mentioned that Deer Creek water might need full filtration treatment eventually. This was received by the manager of the association as a terrible threat and he made "the need for filtration" a personal issue to which he was violently opposed. The irony of the situation is that after all his bitter battling when the proposed program was being formulated for the approval by the state health board, his association soon announced plans for installing a complete treatment plant for Deer Creek water, not for health but for taste and appearance reasons.

The results were: The mayor got a bill presented and passed in the State Legislature which permits cities to levy a four mill tax for water and sewage purposes.

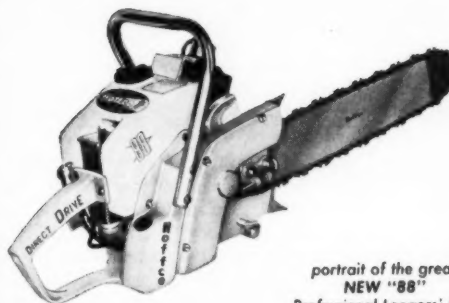
The State Legislature passed the anti-pollution bill and also approved a revision of the State Health Code so that at long last the State Health Department was able to set and enforce standards. The city government then began to draw up a ten-year program which, after some debate and compromise, was approved by state health agencies and the United States Public Health Service. Since then one water purification plant has been completed, two reservoirs have been covered and a second purification plant has been started.

Now, my point is this. The scientific facts were known—certainly the way to solve the problem was known; and



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eventually the public went along. What was needed was someone to bridge the gap between the experts, the special interest group and the voters.

I once read a very high-minded definition of politics which has stuck in my mind. "Politics is the point at which knowledge meets life and becomes socially effective." The politics of water run deep and full of currents and cross-currents, there is extensive knowledge available to us; to make this knowledge socially effective requires a mastery of the politics involved and an ability to effect compromise.

This may be the special function of

citizens groups—those that have no axe to grind—that wish to see the problem whole. It is a safe generalization that most Americans recognize that all natural resources including water should be developed so as to assure their best use and their maximum contribution to the national economy, growth, strength and general welfare.

How to do this is, of course, the big question. Undoubtedly to find the answer it will take your brains, and resources and scientific research. It will also take citizen groups—many of them—to translate the scientific truths into action.



## The Scientific Basis For Resources Conservation

(From page 18)

found that ultraviolet radiation penetrates the ocean to a greater depth than had been supposed, but too little research has been done on the possibly harmful effects of the ultraviolet rays of sunlight upon various types of organisms. This would appear to be of little practical application; yet actually these results could be indirectly related to our food supply. If the mass culture of algae were ever undertaken on a serious scale, for example, these findings would be pertinent and they also have a more direct relation to the food available for fish and shellfish used for human consumption.

A study being made by Dr. David Chandler, of the University of Michigan, on the "Limnology of Northern Lake Huron" is another example of a project oriented in general toward the elusive business of biological productivity, what it is, and how it can best be measured. As the management experts among you know, the management of any natural biological resource is of course dependent upon knowledge of productivity.

A project of an entirely different character is being carried on by Dr. Bonita Neiland at the University of Oregon, who is studying "An Isolated Remnant of the Forest in the Tillamook Burn Area." Twenty-two years have elapsed since the original holocaustic Tillamook Burn fires destroyed a forested area in northwestern Oregon, but almost no re-establishment of tree vegetation has occurred over most of the area in spite of intensive artificial reseedling practices. And apparently no one knows why. Dr. Neiland is compiling rather complete information as to the ecology of the remaining unburned forest as a standard for comparative investigations of the burned areas. In trying to find what combination of soil and microclimatic conditions resulted in the magnificent forest growth in Oregon, she may well find new data with pertinence for other reforestation projects.

Studies of specific species of animals also cover a wide range and variety. Dr. Archie Carr, of the University of Florida, has been carrying on, for several years, studies of the "Ecology, Migration, and Population Levels of Sea Turtles in the Atlantic and Caribbean." Now a rapidly vanishing species, the sea turtles once inhabited the waters of the Caribbean and Gulf of Mexico in great numbers, furnishing an important source of food to people in those areas. Through extensive tagging and netting programs, the investigator is supplementing in a valuable way our limited knowledge of their life history, ecology, and migratory

habits. When information from this study becomes available, it may well lead to improved management practices, such as catch limits, closed seasons, protected breeding grounds, and other measures.

The behavior patterns of the moose are being studied by Dr. Margaret Altman, working out of the University of Wyoming. During the summer months she observes these animals in an attempt to develop information hitherto lacking on problems of leadership, dominant and subordinate behavior in the groups, and finally integration in the herd. She is obtaining histories of individuals and family groups under various conditions and is studying marked individuals in order to follow their histories in detail over a three-year period. Although the moose is the subject of considerable interest, as evidenced by the volume of folklore, legend, and hearsay transmitted by hunters, guides, and others, it has been impossible to distinguish hearsay from fact. This scholarly study should amend the deficiency by supplying factual information on which the management of certain big game animals can be based. Many of the difficulties in the conservation of deer could probably have been obviated if we had had adequate fundamental knowledge of life history, behavior, reproductive potential, and so on.

Fish conservation represents still another area in which basic data are urgently needed. We are well aware, for example, of many cases where stocking programs have failed because the species planted could not survive and reproduce effectively under existing environmental conditions. Several studies undertaken with NSF grants should contribute useful fundamental knowledge in this area. A study at the University of Maryland, under the direction of Dr. Howard Winn, is making specific comparisons of about 20 species of darters with regard to locomotion, sex ratios, courtship, spawning acts, territories, ranges, population structures, and many other related factors. An investigator from the University of Michigan, Dr. John Bardach, is making under-water observations of a variety of reef fish in Bermuda. In addition to making an important contribution to the taxonomy of fish, this study may also be considered as contributing indirectly to conservation because the information so obtained may well be applicable to other fish.

The few projects that I have described will, I think, suffice to make my point, namely, that ecological studies, no matter how fundamental and abstract they

may seem, ultimately have an important bearing on conservation and management practices, showing us, in some cases, where we may be off on entirely the wrong track. The moral to be drawn from this observation is that the continuing support and encouragement of fundamental research in our colleges and universities is one way of advancing the cause of conservation.

Another and perhaps related problem is the training of young scientists in the fields that are important to wildlife management and conservation practices. We hear a great deal these days about the shortages of physicists and engineers because these fields are so directly related to national defense. One of the problems is to persuade able students to resist the lure of high-paying jobs long enough to complete their graduate training. Although the situation in the biological fields is less acute; nevertheless, there is sufficient demand from state and local agricultural and conservation programs for young biologists that many of them are diverted from the years of broad graduate training that are essential for the able ecologist. There must be a conscientious effort to encourage students with aptitudes in biology to stick with their graduate training in order that they may eventually contribute to this relatively new and highly important field. The National Science Foundation fellowship program, which annually awards approximately 800 predoctoral and postdoctoral fellowships, affords a splendid opportunity for capable graduate students in all fields to study under experienced investigators and to acquire their master's or doctor's degree without severe economic hardship and sacrifice. I am pleased to note that this year, out of a very small number of senior postdoctoral fellowships offered by the foundation, two went to ecologists.

I come now to the third aspect of science in relation to wildlife management and conservation practices, and this is in the shaping of national policy as it relates to these problems. Let me make clear that it is not a question of government control or domination, but rather one of effective partnership between the federal government and local government as well as private groups. Preserving the productivity and beauty of our natural resources is clearly a problem that cuts across state boundaries and affects all of our people. Indeed, we are beginning to see that conservation in its broadest sense knows neither natural nor man-made boundaries, and what is being done



in the far reaches of the earth may ultimately affect or influence the rest of the world.

The Department of Agriculture's Conservation, Research, Forest, and Soil Conservation Services; the Smithsonian Institution; Interior's Fish and Wildlife Service, National Park Service, and other bureaus; as well as other departments and agencies, have all demonstrated how importantly the government can aid in the conservation of our precious and finite resources. As the years go on, however, the problems become more complex, and legislators as well as administrators need sound scientific data upon which to base decisions that may affect the lives of millions of people including unborn generations. The public as a whole needs to achieve a much higher standard of scientific understanding than they have hitherto had. It is partly a matter of education and partly a matter of informed public opinion. In the National Science Foundation, we have been stressing the need for better education in science, not only for those who intend to make science a career, but also for those who will be our leaders in all fields.

More and more, as time goes on, we shall be called upon to decide with our ballots issues in which science and technology play a crucial role. The regulation and control of waterways, the use of public lands, urban redevelopment plans, are but a few of a long list of such issues which one could enumerate. Only last week, the Administrator of the Soil Conservation Service, Mr. D. A. Williams, in a letter to the NEW YORK TIMES, called attention to the fact that during the last 15 years more than 17 million acres of the best farmlands have been converted to nonagricultural uses, and that projection of the present rate indicates that an additional 27 million acres of productive land will have been withdrawn from agriculture by 1975. Noting the rate of population increase and the rising curve of food consumption, he warned that failure to prevent undue conversion of good lands to other purposes and to protect and improve our remaining productive soils might have serious repercussions on future generations. Here is an excellent illustration of a situation in which public officials as well as private citizens need to be fully informed of the ultimate consequences of contemplated courses of action.

More and better science courses, including general science courses, in our secondary schools as well as in our colleges are part of the answer. The other is the need for a more effective telling of the story of science through the media of mass communication. Many of the newspapers and popular journals are doing fairly well in this respect. But television



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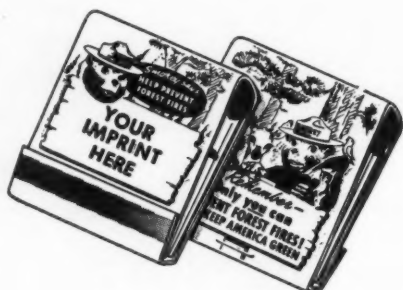
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hasn't even scratched the surface of what might be done. Young men and women who are interested in careers in journalism might consider the pleasures and rewards of a career in science writing, as such. To be fully effective, they should acquire, in addition to training in writing, a good background in several of the sciences. But I believe the most important need of all is for scientists themselves to develop the ability to express themselves clearly and effectively without leaning on the crutches of their scientific jargon. *Deserts on the March* and *A Sand County Almanac* are lasting contributions to the cause of conservation because Sears and the late Aldo Leopold speak with the authority of experienced scientists and conservationists, and also because they are able to clothe the bare scientific facts with a beauty of language that would do credit to a poet. And everyone knows that it is the poets and the artists who are the ultimate spokesmen of their age!

Conservation in the United States owes much to the Wildlife Management Institute and to other dedicated and devoted private groups that have awakened the public conscience to the wholesale despoilation of our natural resources. Scientific research stands ready to contribute the results of its findings to the cause, and it is to be hoped that those who are deeply concerned with this problem will enlist the aid of science in dealing with problems that can only grow greater with time unless we are prepared to deal with them adequately now.

## Talking About Trees

(From page 8)

pedeza, the Parris family built a three-and-a-half acre lake on their farm with the help of the Soil Conservation Service. It is now well-stocked and affords both the family and their friends great pleasure.

Next, the busy couple purchased 18,000 loblolly pine seedlings from the State Forestry Commission. Their whole planting program cost approximately \$150 and they had a survival rate of 95 per cent. The following year, as an experiment they planted 3,000 Arizona cypress trees for the Christmas tree market. A year later they planted 3,000 more. Buyers will be encouraged to come out to the farm and cut down their own trees—an idea that is catching on in other parts of the country.

Mrs. Parris also went into the worm business and today has 100 catalpa trees soon to bear a worm crop which she plans to sell to visiting fishermen.

How does Mrs. Parris carry on her tree farming program and manage to do a TV program five days a week at the same time? The answer is she doesn't—not any more. When the young couple were busy rejuvenating their farm it was fun to dash back and forth to Atlanta between two jobs, but the day came when either the farm or the program would have to be given full time.

Mrs. Parris chose the farm unhesitatingly and has never regretted it. But before leaving her TV work, she kindled much additional interest all over the South in good conservation practices due to her bright, fresh approach to land management problems.

## Flight to Freedom

(From page 15)

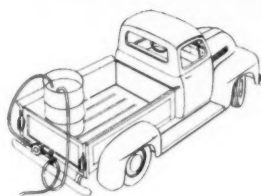
their faces were shining and eager. Had 12 years of Communist propaganda had any effect on them? How they laughed when we asked that. "How could any thinking person swallow the theory when everything around him attested to its absurdity," they replied.

The two visitors took Dean Roller home with them to make his own on-the-ground reconnaissance as to the needs of his school in the new world. With Dean Roller were three of his students and 56 other refugees.

"At first the group was quite withdrawn—probably saddened by what they were leaving behind and not a little fearful about what might lie ahead," Dean Allen recalls. "Then slowly they changed. They began to smile a little on our bus trip to Munich. They found their air legs between Munich and Amsterdam and were able to laugh at some fairly severe bumps. That night at Amsterdam they sang at dinner as the orchestra played Hungarian music in their honor. By the time we were over Greenland the next day, they seemed like a normal happy group of tourists back from vacation in Europe. Children had lost their unnatural quiet and their frightened looks and played noisily like normal children everywhere. It was a great moment when we sighted the shores of Canada and the white mountains of Baffin Land appeared out of the haze—one of the greatest I have ever known. And the climax came when we dropped down into the beautiful fairyland which is Vancouver on a clear, winter night. The flight was over and 60 more souls



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breathed the air of their new country for the first time."

Dean Roller's trip to Vancouver served two purposes: 1) To see something of Vancouver, the university, and Powell River, and 2) To discuss details of the Sopron School's move to Canada. Invaluable in this work was student leader Miklos Gratzner who had a business-like eye for detail. They returned to join their group in Austria on December 24. On December 28 the entire group left for Liverpool and as the New Year dawned, sailed for Canada on the Empress of Britain.

Did they have a good trip? Apparently so. Eleven courtships and marriages between students took place either in Austria, en route, or soon after their arrival on January 24 at the reception center at an old Royal Canadian Air Force camp near Abbotsford, British Columbia.

There the newcomers learned that a whole nation had rolled out the red carpet for them. The Red Cross and other service groups turned themselves insideout to provide the Hungarians with every comfort. Early in February, the Forestry Club of the University of British Columbia rounded up every citizen with a knowledge of the Hungarian language for miles and invited the whole contingent to the campus for a luncheon, basketball game and dinner.

The visitors were delighted with a big banner "Udv Az Erdesznek" (Welcome to the Foresters) on the U.B.C. Memorial Union. They gave vent to their pent-up emotions at the U.B.C. versus Whitman College basketball game by cheering lustily for their newly-adopted alma mater. And thanks to the interpreter recruits, the language barrier was easily overcome and anyway a broad smile is first rate communications in any language.

The arrival of the school at Powell River found the whole town agog with excitement and with inhabitants determined to outdo each other in exhibiting the hearty brand of Canadian hospitality. There, Dean Roller and his staff and students asked if they might be permitted to do their own cooking and administer the camp "in order to save money" after a round of entertainment. This plan was adopted and the entire camp is operated by the Hungarians themselves with the assistance of a Powell River Company camp manager.

To make the newcomers at home,

the company carved up bunkhouses to provide 22 classrooms, student and faculty lounges, and a television room. The main subject in the curriculum is English, forbidden behind the Iron Curtain. The professors, wives, families and students take an intensive five-hours a day of English lectures. Younger children were quickly integrated into the Powell River public school. English lectures are supplemented by lectures from the university professors, government and industrial men giving a basic course in customs, culture, economics and history of the free world, with particular emphasis on Canada, supplemented by outlining lectures on the forestry and economics of the West Coast in contrast with European forestry.

While the future of the "transplants" from Sopron is not quite clear as yet, apparently the faculty members will gradually be assimilated into the U.B.C. Faculty of Forestry when they have learned English. Meanwhile, both school and industry leaders are working on plans to provide Sopron students with forestry projects during the coming summer months—which will further facilitate the task of overcoming the language hurdle.

How does Hungarian forestry compare with the brand practiced in western states? According to Dr. F. Tusko, of the Sopron faculty, Hungarian forests would more rightly be classified as estates by American standards. "Growing forests of our entire country contain about 100 million cubic meters," Dr. Tusko said. (Translated into a more understandable unit, the growing stock equals 21 billion board feet. British Columbia harvested about six billion board feet during each of the last two years.)

A dendrologist, Dr. Tusko reported, "Only six percent of Hungary's timber trees are conifers, like the Douglasfir and western hemlock here. Half of the trees are oaks, while black locusts are important in the remainder."

Forestry is much more intensive in Hungary than in British Columbia, Dr. Tusko said. A gauge of the great difference in the two countries is the fact that the Sopron school normally graduated 60 young men each year. U.B.C. has given the province and Canada about 25 foresters each year in recent years. There seems little doubt that the new school will provide Canadian forestry with a real shot in the arm.

With the world's most-travelled



university securely established at Powell River and ready to move to U.B.C. sometime this fall, a rededication ceremony was observed on March 3 of this year attended by President Mackenzie and notables from all over Canada. It was an occasion unique in forestry annals and it was perhaps Dean Roller who best stated the significance of the event. He said:

"It is not an everyday occurrence that the students and staff of a university leave their own country to find a new home in order to be able to preserve their ideal of freedom and to live as free men. I believe I am not conceited when I say that our exodus shall be written on the pages of history to provide example and inspiration for generations to come.

"What can we learn from the example of Sopron University?

"First of all, this: ideas cannot be made acceptable through force; new social systems cannot be created by oppression. Only the will of the people—the free will of the people—can create new social order.

"Since it was not the will of the Hungarian people that a communistic social system be adopted in the country, but that system was forced upon us, the end result was that we had to start out on the journey of the homeless.

"Nobody can evaluate what a tremendous failure this is from the point of view of the Soviet system.

"The conscience of nations shall long remember those pages of Soviet-Hungarian history which Mr. Khrushchev or Mr. Bulganin shall never be able to explain satisfactorily to any intelligent man.

"Canada's receiving these refugees, on the other hand, shall everlastingly remain a bright page in Canada's history. Because it is an immensely positive contribution to the whole of humanity when a nation—Canada—gives new homes and hope to so many Hungarian refugees, among them our own university. I am quite sure that the entire world regards this action of the Canadian people as an outstanding expression of humanitarianism and understanding.

"But by being received into this country our task is not over yet. As the snow covers the graves of those who fell fighting for liberty, and as the memory of the uprising diminishes, we ask of all Canadians, even as we pledge ourselves, not to let the flame of freedom disappear.

"This is our common duty, be-

cause it is false to believe that any one country can remain free for any length of time while other countries are cruelly oppressed. We all have to understand that peace is not the absence of war; and that after the butchery of a nation it is hypocritical to talk piously about peace. It is more than hypocritical; it shows a serious lack of historical and political responsibility.

"We have to explain to everybody—workingmen, intellectuals, socialists and even communists—that the imperialistic intentions of Bolshevism are only camouflaged as Socialism. In fact, this Bolshevism has lost all its credit as far as seriously thinking people are concerned.

"In a small, destroyed country like our Hungary, nothing specially Hungarian happened. The revolution was not the outcome of fiery Hungarian temperament. It was a fight for the freedom of humanity and especially for the freedom of the working classes.

"This, then, is the crucial question: if the ideal of freedom, bestowed upon us by God and Nature, for which people have fought and died through the ages, can be erased from people's minds, crushed in its manifestation in the East—could it

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perhaps some day become an empty illusion in the West, too?

"I speak about this subject deliberately, although I realize that this is somewhat unusual in an opening ceremony like ours. But I wanted to talk about it because I realize that in this community of Powell River people were willing to risk their lives for the freedom of their country (in the World Wars) on an unequalled percentage scale in the whole of Canada; and it is these people who so graciously opened their doors to us.

"I am going to quote a letter which a student of mine received from his father who is still in Hungary: 'We Hungarians, expecting freedom here, are extremely grateful to the freedom-loving people of Canada and especially Powell River for receiving our sons with so much love.'

"We too, are extremely grateful for your hospitality. But we want to do more than feel grateful. This

question occurs frequently in our minds: What can we do to express our gratitude? At this very moment we cannot do very much. But later we hope we shall be able to contribute to the development of this country, this province, and Powell River itself.

"Of course, we must first learn English. Then we shall have to complete our university work to be able to do our best for our gracious hosts.

"This is our program, for which we asked God's blessing in our church services.

"And now, to enable us all to fulfill this plan of ours I wish good health and strength to my students and colleagues, and on their behalf ask our Canadian hosts to help us so that we together might work for a better future for Canada, and Hungary, nay for the whole of humanity!"

A fitting statement, all agreed, for one of Canada's finest hours.

## Logging in Recreational Forests

*(From page 22)*

brought in a bidder from the north, the Big Bear Timber Co., headed by a forester, David H. Rogers. That was four years ago. The firm built a mill at Redlands and began the big sanitation-salvage logging program with a well-equipped, veteran woods crew. Highly mobile, this crew sought to make a go of it on a meager "diet" of a tree or two per acre despite the extreme roughness of most of the terrain. Other sales followed, supplemented with some private timber purchases which were harvested according to the same standards used on the national forest. There were "fire sales" too—salvage cutting of recent burns. On one of them the Big Bear loggers went up above 8,000 feet elevation to get over a ridge to the burn. The trees salvaged each year have made more than enough lumber to build 1,000 homes.

Early in December, 1956, the Southern California section of the Society of American Foresters took stock of the big sanitation-salvage program at a meeting in Arrowhead Springs Hotel near San Bernardino. Featured speakers represented all major divisions of wild-land management. Many of California's top foresters and natural resource leaders spoke up. Quotations from speakers tell the story of how the logging is viewed:

Burnett H. (Bernie) Payne, assist-

ant regional forester in charge of timber management: "We are doing this job to reduce forest vulnerability to catastrophic pest attack. ... Sanitation-salvage logging in southern California is now recognized as a potent tool of forest management. ... It's a new concept to southern California, but every forest here is now using sanitation-salvage techniques to a greater or lesser extent. ... No other lumbering operation has been so fraught with the necessity of cooperating with the public. ... I think informing the local people is as much a part of the program as marking of the trees ... you have to convince them this is right and you can convince them."

Charles B. Eaton, entomologist, Forest Service: "Sanitation-salvage has made a place for itself here. ... Other methods are too costly and ineffective. ... Results of sanitation-salvage treatment of Barton Flats timber are encouraging."

Max Doner, forester, Big Bear Timber Co.: "The public relations problem is extraordinarily important here. ... We must do the best possible job of forest management. ... Even some of the foresters are reluctant to do the job they know should be done. ... We have a very difficult logging operation due to steep country, light volume per acre and high percentage of defect in

logs. . . . Even green trees ran 20% cull, and the faller's scale ran double the landing scale. . . . Our loggers were trained in special methods and they have to exercise all their skills in woods and on the public highways to meet requirements of the public interest. . . . We leave a tractor and crew behind to clean up and smooth up. A crew of four to six men with chain saws stays on the slash—piling, limbing, scattering, chipping and disposing by burning when possible. . . . Our men try to leave scarcely a mark of operation."

Charles C. Beardsley, Valyermo district ranger in Angeles National Forest: "We were very much against a timber cutting operation at Big Pines at first. We argued even over a few trees to accommodate skiing. . . . Now we feel sanitation-salvage is really the answer to our problem. . . . I'm surprised we didn't get more kicks from the people. . . . We explained the program ahead of time by every means we could—news, radio, speeches—and we got very few objections; they were, in fact, minor; nothing organized. . . . At Big Pines we took out 11,000,000 feet from 4,800 acres and got \$116,000 revenue. . . . It figured out one tree taken, 10 trees left. . . . Including merchantable dead trees, it came to 2,300 feet per acre, or about two trees."

Carl O. Gerhardt, Los Angeles County Parks Director: "End result of sanitation-salvage is a forest of green trees that we like to see—no snags, no decadent trees. It reduces the fire hazard. I've seen the result at Big Pines and it's good. Forest recreation benefits from this work."

John F. Janssen, California State Department of Fish and Game: "Foresters have done a wonderful job of teaching appreciation of multiple use."

James Mace, in charge, southern California district, State Division of Forestry: "Sanitation-salvage logging is still on trial here. We're dealing with recreation first. We must perpetuate the forest for recreation. If we don't take effective measures we'll see all our forests destroyed. . . . Fire is a terrible enemy here. Under natural conditions the continuous canopy serves to propagate flames. We have to get the fire down out of the tops. Sanitation-salvage is the best way to do it. By thinning, opening, building roads we can give ourselves a chance to stop fires. You can't lock up this forest and preserve it."

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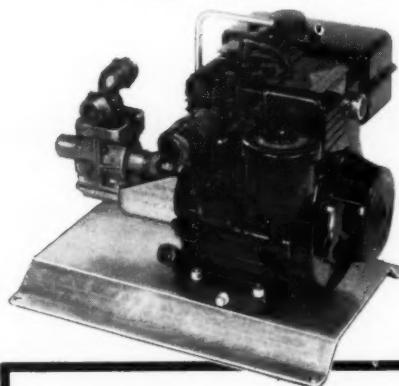
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lage (in the big fire in November, 1956) because a small owner's tract just below it had been given sanitation-salvage treatment. This logging had been protested by a local group. The fire made a 100% kill as it neared; but when it hit the sanitation-salvage area, we could backfire and bring it down out of the tops. We stopped the fire there. If it hadn't been for the thinned area, we may have lost not only Santa's Village but nearby homes and woods, some owned by people who had objected to the thinning. They have been singularly silent about the loggers since the fire."

Walter S. Hopkins, Forest Service specialist in watershed management research; "Properly planned and done, sanitation-salvage fits in with watershed management. . . . Its greatest benefit to watershed values is indirect—reduced fire hazard. Breaks in the canopy achieve this result. . . . Loggers must understand watershed values at stake."

Henry J. Vaux, Dean, University of California Forestry School: "We are witnessing in southern California a virtual revolution in concepts of forest land management brought about by increasing intensity of land use resulting from pressures of growing populations. . . . We've been

talking about multiple use for years while allocating uses. Here in southern California we're really putting multiple use to work with sanitation-salvage logging."

DeWitt Nelson, Director of the California State Department of Natural Resources and National President, Society of American Foresters: "Better integration of our whole resource management and development program, including water management, is the objective that is being furthered by pioneering steps taken here. I know of no place in the country where so many people are dependent on the work of so few."

Les Salm, fire chief and forest manager, Lake Arrowhead: "Our main hope is to get this forest thinned out and cleaned up so you can ride horseback anywhere in it. Then we'll be able to fight these fires under almost any weather conditions."

It should be pointed out that the logging which was discussed by the southern California section of the Society of American Foresters was that it was done mostly on U. S. Forest Service lands under their strict specifications and supervision. There are, however, quite extensive privately owned lands intermingled with the national forest lands. During the past couple of years some of these have been cut much more heavily up to, in fact, the permissive cut of the South Sierra Forest Practice Rules which apply to this area. These rules require the leaving of trees under minimum diameter and sufficient seed trees to regenerate the area. These rules were not designed, however, to fit southern California as there was no logging there in 1947, at the time the rules were adopted. Some of this incidental logging, which exceeded the sanitation-salvage cut, stirred up an uproar from the mountain communities of San Bernardino County and from the county government of that county. Protests were made to the California State Board of Forestry. Some of the protestants wanted to have the board prohibit all logging except sanitary cuts. The board did not have the power to do so as it might be considered taking away a property right without due compensation. The board did, however, order the Division of Forestry and the South Sierras Forest Practice Committee to make a study, which is currently under way, of some special rules to apply to southern California.

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Actually, it should be pointed out in no uncertain terms that any private owner of timberland in southern California who cuts more than necessary for sanitation purposes is "penny-wise and pound-foolish." His land for recreational purposes, with a pleasing stand of timber, is worth at least 10 times more than its value for timber production. If a private forest land owner contemplates the harvesting of his timber up to the limit permitted by the state forest practice rules, it would be wise for him to not alone consult a forester but a psychiatrist. It is believed that most private owners of forest land in southern California have a pretty good idea of the economic value of the forests for recreation. There may be a few, however, uninformed and, of course, there is the possibility of an absentee owner who might be attracted by cash of a timber sale, not realizing its economic implications.

Without dissent the conference of the southern California section of the Society of American Foresters approved the sanitation-salvage program of the U. S. Forest Service.

The Daily Redlands Facts of December 11, 1956, reporting on the conference, summed up the reactions to sanitation-salvage as follows:

"When forest experts gathered at Arrowhead Springs Friday for a panel discussion, they tossed no barbs at the program of selective logging in the mountains you can see from Redlands. They had only

praise for the plan of thinning the stands of pine and fir by cutting out the old and weak trees that would soon become beetle bait.

"How strange.

"When the U. S. Forest Service boys inaugurated this deal a few years back, they were as timid about it as a group of small boys walking by a graveyard at night. They were afraid that conservation people would blow up a storm.

"But the public never let out a peep. It was obvious that the old attempt to fight the beetles just wasn't drastic enough. A few thousand dollars here and a few thousand dollars there wasn't bringing anything more than spot cleanups. It became necessary to get one jump ahead of the insects, cutting out trees before they became infected. This the public could well understand.

"This left the professionals to be heard from, and this week they had their chance to speak up and criticize, if they had any objections in mind. On the contrary, they said the thinning of the forests is not only helping to fight bugs; it's a help in fire fighting, too.

"In considering another policy matter—whether the present fire control methods are drastic enough—we hope that the Forest Service will look to the lesson of sanitation-salvage logging. That is, if the public will go along with marked changes in policy when the logic is clear."

## The Wilderness Congress

(From page 30)

and all users must be considered. Within that framework, the Forest Service will protect, preserve, and maintain as wilderness those areas on the national forests which are primarily valuable for that purpose. We will continue to study existing primitive areas and classify as wilderness or wild areas those portions which are predominantly valuable for wilderness. . . . New areas will be established when such action is justified by public need and by careful analysis of the total resource situation in each potential or proposed wilderness area.

"Seventy-three primitive areas with 14,235,000 acres were established by the Forest Service; 38 of these areas, with 4,598,000 acres have been restudied and established under Secretary of Agriculture regulations.

"Although over 400,000 acres of former primitive area have been re-

moved from administration of the Forest Service by Acts of Congress, the net total acreage classified or administered as a wilderness shows an increase of 65,376 acres.

"The Forest Service understands the philosophies, interests, and viewpoints of wilderness advocates. We enjoy a cooperative understanding. We value the public opinion secured by contacts, letters, and hearings where they may be necessary. Decisions regarding establishment of wilderness areas or the modification of their boundaries are not rendered hastily and only after the most thorough study of the whole situation and full consideration of the value of the area for wilderness in comparison with its value for timber, water storage, mining, mass recreation, etc.

"The best wilderness protection is going to be the best job of using,



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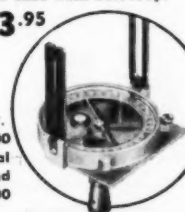


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developing, and protecting all of the mass recreation opportunities that are available on all land ownership.

"... Our interest in wilderness is strong and it will stay that way. The Forest Service believes that wilderness is a valuable use of national forest resources. . . . We are going to do our best to manage the national forests so they can supply the nation with water, with timber, with opportunities for mass educational use, with minerals, with forage, and with wilderness."

Conrad L. Wirth, Director of the National Park Service, gave a very comprehensive paper dealing with the problems and policies of national park administration. In speaking of wilderness, he said in part, "When we think of wilderness preservation in national parks, we think of something more than just roadlessness. Indeed, wilderness preservation is complex and positive. A vigorous program has to be carried out successfully if the preservation objective is to be achieved."

"Nature is an organism; it is an intricate mechanism with many parts, each related to the others and each having an effect on others. In the national parks we try to preserve the integrity of that mechanism—the wholeness or completeness of nature—insofar as that is possible in the relatively small segments of nature designated as national parks. Under this concept of wilderness, the building of a road or trail into it may be far less destructive of the natural character than are such activities as hunting, predatory animal control and the grazing of domestic livestock."

"Another phase of national park wilderness preservation relates to the problem of bringing man into the wilderness in such manner that he has the feeling of being in nature and being a part of it, without spoiling or impairing its natural integrity. Admittedly, this is the more difficult part and there has been much trial and error. The problem is easy when only few people are involved, but it becomes much more complex and difficult when millions of people want to get into the wilderness every summer."

"Thus, the problem of wilderness preservation as we see it, has two main parts—one, preserving the natural or physical integrity of the area, and two, preserving the feel of wilderness, the sense of being a part of nature."

"We in the Park Service have re-

cently prepared a statement on the preservation of natural and wilderness values in the national parks."

"As explained in that statement, preserving the natural character and integrity of the parks means protecting them from logging, grazing, mining, water storage projects, hunting and trapping, and, if possible, acquiring the inholdings of private lands before they are put to uses utterly destructive of park values."

### CONCLUSIONS and RECOMMENDATIONS

The conference, after two jam-packed days of listening to various papers and the animated discussions which followed each, boiled the whole mass of testimony down into a series of conclusions and recommendations. These strongly endorse in principle two measures now before Congress—The Outdoor Recreation Resources Review Bill (S. 846) and The Wilderness Bill (S. 1176).

George Marshall and his committee stated in part, "A satisfactory and well-rounded standard of life for our growing population calls for enhanced appreciation of outdoor scenic and recreational values."

"Exactly what acreage is required for fulfillment of the various needs is unknown, but it is known that numerous superb areas, small and large, have been lost, or have been whittled away during the past decade, and more are slated for destruction. It is also known that areas not specifically set aside for protection with strict boundaries and with strict standards of quality have little chance for survival in our civilization."

"The valid pressures for raw materials (including water); agricultural products; military requirements; transportation; growing urbanization and industrialization; and commercial, mechanized recreation, and mass entertainment are of such great intensity that in our preoccupation with them, we could lose sight of scientific and inspirational values. This great and prosperous nation can afford to give attention to the values which are more than the material and are indispensable to the welfare of our people."

"Resource surveys have been undertaken for land and water uses, including forest products, minerals, water, highway, military and urban development. However, these surveys have to date given scant, if any, consideration to wilderness and other scenic and outdoor recreational needs."

"It is essential to know before it is too late what wilderness, wildlife, scenic, and other outdoor recreational resources still are available, where they are, and what is the type and quality of each, and their relation to the preservation of wilderness. It is also essential to estimate how many and what types of each we shall need in fifty and a hundred years, and how we may best save those selected for preservation with high standards of size and quality in perpetuity. If the opportunity remaining to save these outdoor recreational resources is lost now, it will be lost forever.

"To this end, we recommend in principle the Outdoor Recreation Resources Review Bill (S. 846).

"We further recommend legislative provision for temporary protected status, pending completion of the inventory contemplated in the Outdoor Recreation Resource Survey, of certain lands of probable high scenic, recreational, and scientific potential as determined by the Commission; on lands so protected there should be no intrusion or development that would preclude their subsequent use in the highest public good in accordance with criteria developed in the course of the inventory."

The resolutions went on to say, "We believe that large-size wilderness should be protected in perpetuity under true wilderness conditions, and that its preservation is essential to the cultural, historic, aesthetic, recreational, and scientific needs of the country, and to the physical well-being of all its people. To provide therefor, we conclude that:

1. A continental wilderness system representing all major types of wilderness must be established firmly, to include units of such quality, size, and variety as to provide adequate scope and space.
2. Most of the units that qualify for this system have either already been designated by the Forest Service, or exist without specific designation on national forests or on lands administered by the National Park Service and by other government agencies, and these agencies should continue to protect the areas of wilderness on the lands under their jurisdiction.
3. Inasmuch as the mounting pressures for raw materials and development are predictably capable of encroaching upon and modifying all the remaining

natural land of the country, it is now necessary: (a) to make the clearest possible statement of national wilderness policy, (b) to reinforce it with full public understanding of wilderness values, and (c) to provide maximum legislative and administrative protection.

4. Administrative agencies are to be commended for advancing the concept of wilderness protection. Without specific legislative authority and review, however, some agencies cannot now withstand mounting pressures for commodity development on lands that should remain wild, and other agencies are becoming progressively less able to do so. A clear legislative basis for wilderness protection is needed.

"The fifth Biennial Wilderness Conference accordingly endorses the National Wilderness Preservation System Bill (S. 1176), realizing that this generation's decision to preserve wilderness will be subject to each succeeding generation's review, but that it will not have this choice unless an adequate preservation program is now developed."

The conference also recommended:

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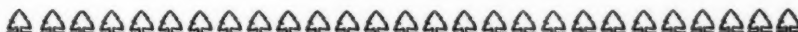
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1. That the Bureau of Land Management designate and administer a large primeval wilderness in north-east Alaska and study additional wilderness possibilities in the Brooks Range.

2. That the 53,000 acre timbered area not included in the Three Sisters Wilderness Area by the Forest Service be continued in its present primitive condition without logging pending further studies under the proposed Outdoor Recreation Resources Review.

3. That the Forest Service invite participation by other agencies and the public in study of the scenic areas in the northern Cascades of Washington between Stevens Pass and the Canadian Boundary.

4. Preservation of the Ocean strip in Olympic National Park as a primitive beach wilderness.

5. The conference expressed concern over mining, and mining access roads and private landing fields on

private inholdings within wilderness areas. It recommended that wilderness, wild, primitive and roadless areas be withdrawn from mineral entry, the landing of airplanes within such areas be terminated and that vested rights be eliminated by purchase.

### SUMMARY:

The Fifth Wilderness Conference was a striking public demonstration of how citizens from all walks of life are able to overlook details of personal interests and personal opinions and dedicate themselves toward the broader objective of future national welfare.

Perhaps the most significant thing to come out of this meeting is the progress that is being made towards securing legal recognition of wilderness as a valid natural resource and putting a firm statutory foundation under its preservation and management.

## Unplanned Policies

(From page 27)

a vested property right to a tax exemption. Numerous claims, beginning with the Choctaw Nation vs. United States in 1881 (119 U. S. 1 p. 41) have repeatedly defined the legal and moral obligations of the federal government as a trustee of Indian property. Under one such action the Menominee Indians were awarded \$81½ million. These various actions and the fact that the Bureau of Indian Affairs is engulfed in some 3,000 land laws should be kept in mind in evaluating any proposals that may develop for disposal of Indian land. Somebody could get sued.

### Termination

Present plans for termination of federal supervision over Klamath, and other tribes did not develop overnight although the impact in some quarters may have seemed so. A treaty of January 31, 1855 (10 Stat. 1159), indicates a belief a century ago that the Wyandot Indians no longer needed federal supervision. This treaty provided termination of their relations with the United States as an Indian tribe; subdivision of the land and patenting in fee simple to individual members; appointment of three commissioners to make a fair division; preparation of a tribal membership list; guardianship for those not competent to handle their own affairs; relief from taxation for five years after

Kansas shall become a state; and the granting of full rights, privileges and immunities of citizens. The Ottawa and Chippewa Indians of Michigan and several other tribes also received termination of tribal relationships. Apparently all members of these tribes did not accept the new freedom, for in 1949 the Secretary of the Interior again relinquished control over the Saginaw Chippewa Indians.

As long ago as 1910 some of the Klamath Indians asked to be relieved of federal supervision. In 1928 a bill to create a Klamath Indian Forest, to be managed permanently by the federal government for the benefit of the tribe, passed the Senate but died in a House Committee. In 1930 incorporation of the Klamath Indian corporation was proposed. In 1946 and again in 1947 bills quite similar to P. L. 587 were presented to Congress. Many of the pros and cons heard today were thrashed over then. Later members of the Klamath tribes who were opposed to liquidation sought passage of a law which would authorize pro-liquidationists to withdraw from tribal membership and be paid 80 percent of the value of their individual shares.

Review of these various proposals and the hearings contained in House Report 2503, 82nd Congress, 2nd Session (1947) clearly indicates that



the proponents for termination of federal supervision over the Klamath Indians have won that battle. There will be no turning back. The choice now is immediate termination or delay.

The 1947 Klamath bill was a test case as similar proposals had been offered for the Menominee, Osage, Turtle Mountain, Potawatomie, Mission and other California groups. Significantly, House Report 2503 stated: "The decision of Congress on Klamath Indians may thus be seen to be of major importance not only for that group but for the American Indians in the country generally."

### Public Law 587

Public Law 587 (68 Stat. 718) directs the Secretary of Interior to:

- (1) have an appraisal made of all tribal property;
- (2) give each adult member an opportunity to withdraw from the tribe and have his interest in tribal property converted into money and paid to him, or to remain in the tribe and participate in a management plan;
- (3) determine the portion of the tribal property to be sold in order to pay off those wishing to withdraw;
- (4) prepare a plan for management of residual tribal property.

Congress now proposes (S. 469) to:

- (1) defer all sales of tribal property under P. L. 587 until the end of the 2nd session of the 85th Congress (about July 1958)
- (2) reimburse the Klamath tribe for expenditures incurred in termination not to exceed \$550,000 (House version) \$1,100,000 (Senate)
- (3) complete termination by August 13, 1960 (House) 1961 (Senate).

These then are a few, a very few, of the events leading to House Concurrent Resolution 108, 83rd Congress, 1st Session (August 1, 1953) which states:

"Whereas it is the policy of Congress, as rapidly as possible, to make Indians . . . subject to the same laws and entitled to the same privileges . . . as . . . other citizens . . . , to end their status as wards . . . , and to grant them all the rights and prerogatives pertaining to American citizenship; . . . be it resolved that . . . all the Indian tribes . . . of California, Florida, New York and Texas . . . should be freed from federal supervision and control . . . " The Flathead, Klamath, Menominee, Potawatomie and Chippewa tribes are also named.

H. Con. Res. 108 triggered termination laws for Menominee,

Klamath, Alabama-Conshatta, Uintah-Ouray, Peoria, Wyandot, Ottawa, 4 Paiute bands in Utah and some 50 western Oregon bands. Reports from several sources indicate that termination plans for the Alabama-Conshatta, Paiute and western Oregon bands have been completed successfully. Only Klamath and Menominee, significantly the two containing a valuable resource, have run into trouble. Here the ancient, basic struggle for control of the land and its resources comes to the fore.

This same struggle will reappear when federal supervision is removed from other valuable Indian lands. Already the Colville Indians in Washington have been instructed under P. L. 772 of July 24, 1956, to submit within five years proposals for removal of federal supervision within a reasonable time thereafter. Will resource planners be ready when the time comes, or will we continue to stumble along, reeling from various pressures, as we have for so many decades, nay, centuries past?

It would be helpful now if someone, a decade ago, had heeded the clear signals of impending liquidation of the Klamath reservation. Somebody should have started a comprehensive economic study of the Klamath Basin to determine the role of the reservation in the overall economy. Such matters as soil capability, future land use, industrial and agricultural development, the tax base, the ownership pattern and dozens of other factors need to be weighed and balanced with each other. From such information a zoning plan for land use might be developed.

Today some of the timbered portions of alienated allotments on the reservation are being cleared for pasture. Question: Is timber or forage the best product of these soils? If it's timber, it will take 150 years to grow a new crop after somebody discovers the mistake.

Some other people wish to drain the wetlands on the reservation for grazing purposes. Again we ask, *what is the best product and which is needed most—grass, water or wild-fowl?*

Fundamentally the questions regarding disposal of the Klamath Indian property are another evidence of the tremendous pressures exerted upon the nation's natural resources by a rapidly expanding population. Other friction points known to all include such things as the million acres being absorbed annually by new urban, industrial, highway and

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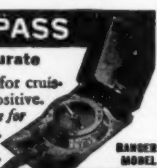
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other uses; land withdrawals for military use; wilderness needs; loss of valuable agricultural and forest land in flood control projects; drainage of the nesting grounds of migratory waterfowl, to name just a few.

The American Forestry Association believes that thorough study of future needs and planned use of all the nation's resources to meet these needs is *mandatory*. To that end the

association has launched a land ownership study in California. The results are being awaited eagerly in the hope that there will be clear cut suggestions for national application. Meantime thorough planning for all social and economic adjustments incident to removal of federal supervision over Indians should be accomplished before other tribes embark upon the termination trail.

## The Baker Laboratory

(From page 19)

At 7 p.m. Thursday, May 2, a dedication banquet was held at Hotel Syracuse, Syracuse. Toastmaster was Frank C. Ash, chairman of the Board of Trustees of the College of Forestry.

The "Purpose of Baker Hall," was discussed in three brief after-dinner talks. Speakers were:

Judge Francis D. McCurn, past chairman of the College's Board of Trustees and presiding justice of the Appellate Division of the New York State Supreme Court; Dr. William P. Tolley, chancellor of Syracuse University; and Dean Shirley. David L. Luke, Jr., president of the West Virginia Pulp and Paper Co., New York City, spoke on the topic "Research in Forest Products for Tomorrow's World."

The actual dedication ceremony began at 9:45 a.m. May 3. Chairman was Dr. Frank C. Moore, president of the Board of Trustees of the State University of New York and former lieutenant governor of the state of New York.

Governor Harriman formally pre-

sented the Hugh P. Baker Laboratory building to State University of New York. Dr. William S. Carlson, president of State University of New York, accepted it. He was followed by Dean Emeritus Joseph S. Illick of the College of Forestry, who introduced Mrs. Hugh P. Baker, wife of the late Dr. Baker, first dean of the College of Forestry, and Mrs. Richard N. Wright, daughter of Dr. Baker. Cutting of the ribbon at the entrance to the building, by Mrs. Baker and Mrs. Wright, opened it to guided inspection tours that concluded the dedication ceremony.

The new, four-story, L-shaped structure provides the College of Forestry with the physical equipment needed for research and education of students planning to enter the wood products fields.

The Departments of Forest Utilization, Wood Technology and Forest Chemistry will be housed in Baker Hall. Also, the newly organized Cellulose Research Institute will be located in this new laboratory building.

## Juiced Up Fish

(From page 23)

Realizing the importance of keeping Nature's cycle unbroken, the Fish and Game Department of Washington and Oregon, as well as the U. S. Fish and Wildlife Service, are engaged in intensive research with various electrical devices. Today fish are counted, guided around obstacles, photographed, and herded into pens both on upstream and downstream migration by the use of electricity.

Adult salmon, on their way upstream, really have quite a series of experiences. In the first place, they have numerous dams to negotiate before they can fulfill their destiny. As everyone knows, spawning salmon fight upriver until they reach the stream that gave them birth.

The obstacles they overcome in the process are almost beyond belief. They leap good sized falls, run rapids against the current, wiggle across sandbars, and dodge floating logs and sunken rocks in an irresistible drive to reach their goal.

Some obstacles they can't overcome, the foremost of which are the man made dams. If left to their own devices, they would dash themselves to death against the face of the dam. However, most of the dams in the lower Columbia River can be negotiated by fish. Man has built "ladders"—a series of gentle steps—at the ends of the dams. A stream of water runs down the ladders. If the fish leap the steps one

by one they eventually get over the dam. The trick is to persuade the fish to go up the ladder rather than try the suicidal task of jumping the entire dam in one leap. And here's where electricity enters the picture.

As the fish approach the face of a dam, they get a slight jolt. The closer they come to the dam, the greater the jolt. This turns them aside and leads them towards the ladders where they don't get a shock. Ergo, they decide to leap up the ladders, thus getting over the dam.

Numerous hatcheries have been built along tributaries of the Columbia as well as the main river itself. Adjacent to each hatchery is a "holding pond." A series of electrodes mark out a direct path from the river to the holding pond. This arrangement is known as an "electrical weir." When fish attempt to pass this invisible barrier on their way upstream, they are guided by a series of jolts directly into the holding pond. There they are dipped out with nets, and the job of artificial propagation is performed by experts at the hatchery.

Young salmon on their way to the sea have as many hazards to overcome as their parents did coming upstream. An adult salmon on its way to its ancestral spawning bed invariably swims *against* the current. Conversely, baby salmon on their way to the sea always swim *with* the current. The two main difficulties confronting young salmon are the turbines of the big dams and the many irrigation ditches which draw water from the rivers. Left to follow their own instincts, millions of baby salmon would either be ground to bits by the turbines of the dams, or wind up in the middle of an apple orchard or an alfalfa field via an irrigation ditch.

Once more electricity comes to the rescue. Just as adult salmon are guided toward fish ladders and holding ponds, so are baby salmon shunted away from turbines and irrigation ditches. They are literally "jolted" safely on their way to the sea.

In addition to erecting all sorts of electrical guides to aid the Columbia River salmon on their perilous journey, state and federal scientists are mighty curious concerning what the fishes do while they are swimming around. Some of the electrical contrivances used in counting and observing the movement of fishes have a distinctly Rube Goldbergian touch. To quote from a scientific report from the Seattle, Washington,

office of the U. S. Fish and Wildlife Service: "Detection by means of electric fish counting equipment consists of an apparatus which may be used to ring a bell, flash a lamp, operate a camera or advance a mechanical counter." It would seem that all these ringings, flashings and tickings would scare the daylight out of any normal fish, but apparently they don't. The equipment is used to measure the numbers, size and activities of fishes during any given period of time—very useful information to scientists who are endeavoring to step up production of one of the greatest fish resources of the nation.

Jumping from the Pacific Northwest to the Great Lakes we come to the scene of one of the greatest "wars" of all to save fish life. About ten years ago an eel-like monster, known as the "sea lamprey" literally invaded the Great Lakes. The sea lamprey preys upon fish of all kinds, but is particularly fond of the lake trout, the greatest game and sports fish of the Great Lakes.

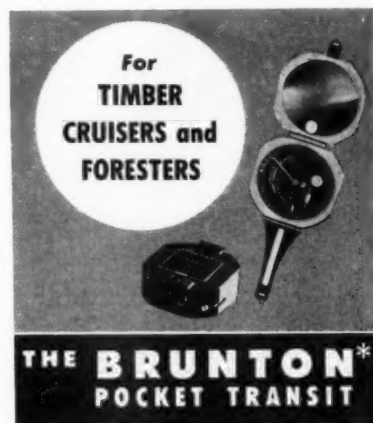
Then in the late 40's, for no reason man has yet been able to learn, the sea lampreys decided to live out their full life span in the Great Lakes. It turned out to be a biological catastrophe. In a very few years the lampreys *completely wiped out* the trout in Lake Huron. Then they moved into Lake Michigan and massacred the trout in such numbers that catching one of these fish in that body of water today is almost unheard of. Other fishes of the Great Lakes were not immune to the savage attacks of the lampreys, for millions of blue pike, whitefish, perch and even suckers succumb to the bloodthirsty killers.

Trout are still to be found in fair numbers in Lake Superior, but late reports show the lamprey has already started to take over. For some unexplainable reason the lampreys do not infest Lakes Erie and Ontario.

During their studies of the sea lamprey, scientists of the U. S. Fish and Wildlife Service discovered a curious (and valuable) phenomenon. If adult lampreys are not able to reach their spawning beds at the time designated by Nature, they will die *without* spawning. Therein lay one of the most important keys in the program of lamprey control.

If an effective means of stopping the migrating lampreys from reaching their spawning beds could be developed, in time the killers would be eradicated from the Great Lakes.

The answer turned out to be an



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electrical barrier that would either kill the lampreys outright, or guide them into a holding pond where they could be easily dealt with.

Developing such an electrical barrier was not easy. Desirable fish also migrate upstream to spawn. The amount of electrical current had to be delicately controlled and manipulated so that fish could get by the barrier but the lampreys couldn't. It took some doing, but the task was accomplished.

No great success has been achieved in halting the down stream migration of lampreys which have been already spawned. The reason is that downstream migrations usually occur during spring floods and the electrical screens simply do not work effectively.

The system of electrical screens to prevent upstream migration was nearly completed two years ago. Taking into consideration the seven-year life cycle of the lamprey, it will take several more years before the full effect of the electrical control will be manifest.

When and if the lampreys are completely exterminated, Lakes Huron and Michigan can be restocked with trout, and it is entirely possible these huge bodies of water will once again support a great commercial and sports fishing industry. If that comes to pass, man will have electricity to thank for the accomplishment of a magnificent achievement.

Taking another geographic hop, we proceed to Florida where electricity plays one of the most fantastic roles of all in the lives of fishes.

Practically every chamber of commerce in Florida goes into rhapsodies concerning the wonderful fishing to be found in the lakes and rivers of the "Sunshine State." According to these purveyors of glamorized information, nowhere in America do bass grow bigger or more plentiful. It is true there are plenty of bass in Florida, and they do grow somewhat larger than they do elsewhere in the United States. There is also a good supply of other game and pan fishes, notably blue gill, crappie (known locally as speckled perch), a fair

amount of pickerel and several other desirable fishes.

But what the chambers of commerce don't advertise, but what is equally true, is that Florida waters support tremendous amounts of "rough" fish. These undesirable piscatorial citizens consist of gar, mudfish, gizzard shad and carp.

Those unlovely fish breed at a tremendous rate and do their damndest to eat up all the available food. More than that, some of them are guilty of the most cardinal of all sins—they eat the young of game fish. So bad is the situation in some Florida lakes that the fish population therein has been known to reach as high as 90 percent rough fish and 10 percent game fish.

About a year ago an ex-Marine radar instructor, who is also a graduate biologist from the University of Missouri, came up with an electrical device that almost defies credence. For want of a better name it has been christened the "fish shocker."

This gimmick has the uncanny ability to paralyze rough fish while passing up game fish. It is a self contained gadget equipped with its own power generator and current output regulator. It is mounted on the front of a outboard driven 19-foot launch. Three booms project from the prow of the craft with copper "ticklers" dangling from the end of each boom. A controlled electric current passes from the ticklers into the water, and when a rough fish feels the shock, it comes to the surface. There the fish is met with a stiffer electrical jolt from a grid of metal cloth suspended just below the surface of the water. This second jolt renders the fish hors de combat. It is then scooped up in a hand net by one of the two assistants who sit in dinghies lashed to either side of the main craft.

The fish shocker stuns fish without killing them. The electrical discharge must be regulated to the exact voltage; otherwise every fish within range would be eliminated. Tim O'Connell, the inventor, is so adept at regulating the current that the machine actually passes up bass, crappie, etc. while jolting the stuffing out of mudfish, gar, gizzard shad, etc.

So successful has the fish shocker become that the Florida Fish Commission uses it constantly, and O'Connell is training assistants to operate it while building more of the devices. At present the demand for fish shockers throughout Florida is far in excess of the supply.

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## Your Cabin's Roof

(From page 33)

abnormal build up of snow at any spot on your town home and you can shovel it away. What you've got to do with your back country summer cabin in snow country is to have that roof adequate at all times, under all conditions that may occur while you're away.

Common sense and thinking all the way through on the construction and materials you will use is the best guide to securing a really protective roof, but here are some suggestions that will help that thinking.

You should rely on your builder's judgment, of course. But if he's one who hasn't had experience in back country construction, he may miff the deal at that. You should do some plain and common figuring regardless and insist on sound roof construction.

First in its building there are the timbers and boards that go into construction of a roof before it is covered with shingles, shooks, rolled composition roofing or sheet metal. If you're in snow country, think of the winter-long accumulation that may stack up. You may want to do some truss-like bracing of rafters if there is considerable spread of roof where snow may lie. This is particularly true in mountain locations and where the pitch of the roof is not steep enough to readily shed snow.

Abnormal snowfall can happen in any mountain area. In October years ago, two of us got out of the Sangre de Cristo range as a cloud mass caught against the high peaks and snow really poured. When we got to town at the base of the big peaks, which took two days to traverse thirty miles, we found a flat-roofed garage caved in on three dozen or so autos, and that with a "king" truss supporting that roof. A lot of other roofs broke under that snow load.

There's another factor in anchoring and bracing your roof properly. The rough, squally storm can create something of a vacuum and "suck" at a roof, about as much as it can push by blowing. Let the roof be a bit insecure, have an edge lifted, and—there she goes!

As you lay the sheathing, which provides the supporting surface over which shingles will be laid you may space the sheathing an inch or so apart. You can't do that with composition covering. You need edge-

to-edge laying of the sheathing boards. Here are reasons for thus requiring a continuous, flat surface.

Stepping on a roof covered with composition roofing when it is hot, you can punch a hole right through with the edge of a shoe sole; at least, pressure can crack the roofing between sheathing boards, and develop a leak. Step on composition roofing with no board under it and you crack it. I've even seen what pounding sheet composition roofing gets by the wind making it billow above sheathing causing a crack where sheathing edges aren't tight against each other. Once the crack is started it continues to enlarge and break.

The sheathing over the adequate rafter assembly is the last step before you apply the outside water-shedding covering, whatever it is. You've got a choice of several coverings, from hand-made shooks to smooth sheet aluminum.

Let's look now at roof coverings.

The prairie homesteader, mountain miner or tie hack, built a temporary cabin. The roof generally was of pole rafters laid eaves-to-ridge close together, brush on top of that, hay above that, then dirt. The dirt roof could hold off a fairly lusty rain and it certainly was insulation, but it stayed fairly moist, logs rotted, eventually these roofs caved in. This construction was prevalent before 1900; and when I first prowled the Rockies, you'd find many old cabins with collapsed dirt roofs.

The homesteaders of the past half century, some lumber camps, similar short-term residential needs, got along with tar paper over the roof. It turns rain. But it is soft, and if wind got hold of an edge, it could tear it from one end of the strip to the other.

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Aug. 20 to Aug. 30; Sept. 2 to Sept. 12  
\$230 from Durango  
Parties limited to 25

### PECOS WILDERNESS, NEW MEXICO

September 9 to September 20  
\$225 from Santa Fe  
Party limited to 25

### GREAT SMOKIES SADDLE TRIP

The spring saddle trips in the Great Smoky Mountains National Park, North Carolina, have been so successful that the association has scheduled another this year, for the dates of May 22 to June 1. Headquarters for the party of 20 will be the Cataloochee Ranch. The itinerary calls for a three-day pack trip from a base camp, including a ride to the crest of Mt. Sterling. Seven nights will be spent at the ranch with rides to Sheepback Lookout, Purchase Mountain, Paul's Gap, Balsam Mountain and other interesting points. Plan to ride in the Smokies this spring when the colorful wildflowers and flowering trees are in bloom. \$200 from Asheville, North Carolina.

Write or wire for detailed information, itineraries, and reservations.

### THE AMERICAN FORESTRY ASSOCIATION

919 Seventeenth Street, N.W.

Washington 6, D. C.

The next step away from tar paper is the rolled, composition roofing. The cheapest kind is actually like tar-paper felting with a more resistant, mica-dusted surface.

The grades of composition roofing that come in rolls are indicated by "weight." Each roll is supposed to contain a "square." In other places the word square means other things, but in roofing it is an area ten by ten feet; one hundred square feet of roof coverage.

The lightest weight rolled "patent" roofing, as old timers called it, is "45-pound." That means each roll weighs that amount; the weight-designation is per-square. This is the felted type of covering with the mica facing. It is considerably better than tar paper; heavier, better surfaced. But it isn't too durable a roof covering. Where it is good is to supply an air-and-water tight layer under such structure covering as shingles or siding.

The mica-faced type of rolled roofing comes also in 55-pound, 65-pound and occasionally but mostly on special orders, in a 90-pound weight.

The next step up in roofing of this type is the standard 90-pound, with a facing of some sort of ground mineral to give a better wearing surface, a degree of fire resistance, a texture.

If you use this sort of roofing, you can make the bottom of that valley between wings of the house, out of the roofing itself. Better make it of two layers and extend it out on either wing a bit—particularly if one wing, as was our lot, has composition shingles covering it. But if both sides of the valley are rolled roofing, you can paste and tack down the roofing tight along the channel, and then you can hit the edge again with a darned good painting with the stick-um that comes with this material, and make it pretty surely water tight.

The rolled roofing can be laid either from one eave over the top and down to the opposite eave, or you can start at the bottom of the roof on one side, laying the roofing in horizontal strips. There are good reasons for laying it eave-to-eave and over the top instead of horizontally.

Your rafters are from eave to ridge. You then lay the sheathing over the rafters horizontally. If then you lay the roofing eave-to-eave, it will lie at right angles to the supporting boards of the sheathing. I suspect mountain folk of the West

(Turn to page 71)

# What's NEWS across the nation

**TIMETABLE FOR AFA'S CALIFORNIA LAND OWNERSHIP STUDY** has been moved back. The report will be released sometime this fall. Both the scope of the study and the thoroughness with which it is being made are such that it was impossible to complete it by spring as originally planned. Eleven typewritten pages were required simply to outline the subjects to be covered. "This will be a report of which we are all going to be proud," Chairman DeWitt Nelson, of the Land Ownership Committee, informed AFA last month. His full committee is scheduled to meet again for a full dress examination of the study this fall—probably around September 17 in San Francisco.

**CHIEF FORESTER KENNETH B. POMEROY** flew to the Northwest last month to study the Klamath Indian situation on the ground and to visit Northwest forestry programs. A report on the Indian situation as it concerns renewable resources on the reservation will be submitted to AFA's Executive Committee in July. En route back to Washington, Mr. Pomeroy will stop at Madison, Wisconsin, to make further plans for AFA's Annual Meeting at Madison this fall. He returns to Washington May 8.

**ON THE HILL LAST MONTH . . .** Chief Forester Pomeroy opposed a move by the House Committee on appropriations to cut one million dollars from the Forest Service budget for structural improvements. "This section, particularly its application to employee housing, is the core of the entire Forest Service management and protection program," the forester said. More favorable treatment for wildlife management on the forests and a crash program for forest fire research were also strongly recommended by Mr. Pomeroy. In accordance with AFA's previous recommendation, he urged that the budget item for forest fire research be increased by \$500,000. On April 10, Mr. Pomeroy appeared before the Fisheries and Wildlife Subcommittee of the House Committee on Merchant Marine and Fisheries to recommend establishment of a Key Deer Refuge in Florida in accordance with H.R. 1058 and H.R. 1127.

**BRICKBAT DEPARTMENT**—The new Forest Service budget representing an increase of 24 million dollars is too big, Newton C. Brainard, of Hartford, Conn., informed AFA last month. Furthermore, AFA's "unquestioned approval" of the budget came as a shock to him, he said. "In the past I have had some experience with budgets, but I have rarely seen one which shows more signs of padding than this one," he said. An attempt by AFA to itemize the budget and show the importance of each item left Mr. Brainard unconvinced. In fact, he came back with a letter that was more adamant than before. "Trim it," he said. On another matter, he was less than impressed by AFA's effort to establish a ceiling of \$100,000 for the observance of the 50th Anniversary of the State Governors Conference. Some estimates of the cost of this function submitted to the House Judiciary Committee had gone as high as one million dollars. Replied Mr. Brainard, "Why should the association approve anything for this purpose?" The Hartford member said it was his belief that things in Washington were getting out of hand and that more New England thrift was needed. A check showed that six members have disapproved the size of the new budget up to this time.

**MORE BRICKBATS**—"Smoking tobacco and forestry just don't make good partners, and I am against publishing pictures in our magazine of men smoking," reports Miss Agnes R. Freeman, of Evergreen Park, Illinois. "In your January issue, no less than three people were shown smoking pipes and in my judgment that is overdoing it. They were Raphael Zon, Richard G. Kimbell, NLMA vice president, and Dr. J. Alfred Hall, of the Forest Products Laboratory. Now please don't write me that users of tobacco in pipes don't start forest fires, that it is the cigarette users. Or that you are not crusading against the use of tobacco for I know that. Frankly, I am against tobacco in any form, and I don't like our young people to see the leaders of a movement that is, and I quote, 'for the advancement of intelligent management and use of forests,' using it."



## Action in the Heart of America

(Continued)

ment, federal and state, for their jobs. Not that that was a dire fate, for many men have gone into government forestry and have made a real mark in the world. But today, the whole situation is different. The big demand is by private industry. . . .

"Foresters are an elite group. Did you notice how few there are, only 17,000? Nearly every agency, public or private, which employs foresters reports it can't find enough. It isn't the highest paid profession in the country, although it does pay well, and with increasing importance of Tree Farming and of the many technical phases of producing and using wood, it is likely to pay better.

"I have noticed, however, that most people, when picking their life work, succeed best when they choose what they want to be, rather than what makes them the most money. Some tremendously capable people choose to teach. Others like to work on country newspapers. They don't starve at it nor will they get rich. But these people, who find what they like to do, aren't the ones who jump out of windows when the pinch comes. Their lives bring them greater values than dollars and their lives are too valuable to them, too pleasant to live, to sacrifice them. The dollar chasers are the boys who are in trouble when the dollars don't flow. Those are poor, indeed, whose only riches fit into safety deposit boxes.

"I didn't mean to get to sermonizing here. I merely thought that there must be quite a few youngsters in our school, and other schools around here, who have an interest in the hills they see about them, have an innate love for nature, are thrilled to see the wood from a tree made into something useful.

"If so there be, let's mark them well, for them a future really swells. . . .

"I hope some of the kids will read these *American Forests* when they arrive. And when you read your copy think this: Would I like this sort of work? Would I be gosh-all-fired interested in it? Maybe those are tough questions to answer. Maybe I should ask: Do you like trees? Do you enjoy a forest? Do you like to see young trees starting? Have you ever wondered where the wood in your home comes from—the pencil you use, the paper you write upon, the cartons and packages your food comes in, the rayon dress your mother wears, the paper on your walls, the blaze in your fireplace?

"Isn't that a challenge to your imagination?

"Some folks tell us our forests are gone. But for a nation built on cellulose just as surely as it is built on steel, and aluminum, and milk, wheat and corn, the forests are one of our basic essentials. The job of the forester is to make certain that this essential continues to exist."

## Five Bridges to Cross

(Continued)

the United Nations, that is making a collective effort to decide where it can agree. In brief, the existence of the Council as a communications medium is a tacit admission that before the various elements of conservation can communicate successfully with the public they must first communicate successfully among themselves.

Going back to Stewart Holbrook's idea for a moment, where does the conservation magazine of the future fit into this pattern? To hazard a guess, it will be highly departmentalized. These departments will be headed "People," "Forests," "Wildlife," "Soil" and "Water." They will be managed not by experts as such but rather by individuals we will call "communicators"—idea people adept at interpreting the conclusions and findings of experts in understandable and readable English. These would be our five key bridges to public understanding and to keep the key theme uppermost in mind it might not be a bad idea to link each of the five departments together by a picture of a bridge.

Headaches and problems? You said it. You'd have them galore. But aren't these the stuff of which great programs and great magazines are fashioned? One thinks of *McClure's*—of the old *Colliers*. Does anyone still remember the Balingier case? These magazines turned problems into opportunities. It was only when they started to duck these problems that they started to go into eclipse and eventually faded away. Yes, The Problem would be the lead story of our magazine format every month. The Problem would be presented by panels of experts locked up in a room until they came up with some answers. The Problem would be presented by fast-travelling writers who would go after a story like a DiMaggio taking off after a fly ball. It would be Alaska one month, Phoenix, Arizona, the next. It wouldn't always be tidy and neat but it would never be dull. And anyway, aren't tidiness and neatness often mere terms we use to explain away mediocrity?

People who feel that conservation has got it made today, won't agree with this. It hasn't got it made. In fact, conservation is one of the most perishable commodities in the world and can slip from the fingers of an entire nation very easily. The existence of a Natural Resources Council is an admission of this fact. It is a further admission that, like Ben Franklin's famous "Unite or Die" flag of many years ago, that in the final analysis we will either work out our salvation unitedly or we will fail separately. Pure water, uninterrupted forestry programs, healthy farms and rich soils, an abundance of wild creatures, and happy, contented people—these are the stakes involved. Yes, it covers just about everything. They are our five bridges to cross.

## Your Cabin's Roof

(From page 68)

lay rolled roofing eave-to-eave because of another good reason; as tearing winds come over one ridge, toboggan into a valley, rush up the opposite slope, they're running on an upgrade line. If roofing is horizontal, the little wing fingers have a better chance of prying in under the overlap, probing a hole through between courses of roofing and starting a good-size leak. On the eave-to-eave strips, with edges well cemented and nailed, and in line of wind thrust there isn't so much chance of wind getting a purchase on the edges where strips join.

You get the cement, a tar product, in a can with each roll of roofing. It's adequate; you can buy a few extra cans to have plenty on hand. The over-lap at the edges of the rolled roofing is made to paste together with this tar stuff and you can get a full sticking together between strips by a moderate application of tar and pressing the edges together, then nailing.

I've found this: Lay that rolled roofing on a moderately warm day; have the roofing itself warm enough to be readily pliable. But if it gets too warm, you can't step on roofing already laid without a chance of "bruising" it and making the mineral facing slip. If it is too cold, it can crash as you unroll it. That moderate degree of warmth and flexibility also helps get well sealed edges.

You get a package of roofing nails—really big, king-size tacks—with each roll of roofing. For my money, they are a washout. Keep them for some other use. Get some extra cement-dipped or galvanized roofing nails, and use them. They have length, and roughness to catch into the board below the roofing felt and hold—for a very long time.

All factors considered, I'd select the 90-pound rolled composition roofing if I start again to build another back country cabin.

Composition shingles have their advantages. They are of the same general material as the rolled roofing, cut so they can be laid in ranks. The 3-tab, 167-pound hexagon shingle, the lightest weight of this type of roofing, is cheapest, is least protective, and I've been told it is being discontinued. You have, as standard, the 210- to 214-pound shingle in various forms. You can get those of 230, 250 and even a "fire check" type

of 320 "weight." Remember this is the weight per square; these shingles usually are packed three bundles to the square.

These shingles supply a more pleasing texture to the roof than the rolled roofing. Because, in the better grades, you have a couple or three layers between the sheathing and the sky, they can fend off leaks if there is a hole through only the surface layer; a hole through the single layer of *rolled* roofing is a leak, period! But I had the doggondest time with one side of our roof that was covered with the heaviest grade of these shingles; it nigh drove me nuts.

When a wind-driven rain would come up the valley, the gusts would pick up that rain, slam it "against the grain," that is against the down side of the shingles, and pretty soon we'd hear the drip of water above our ceiling. After the storm was over, I'd search and search for holes, patching with tar any likely leaks. But what happened was, the wind simply fingered in beneath layers of shingles, and *drove* the rain back, upslope, under them, until it spilled over the rear end of those layers.

There's one serious question about using any of the "patent" roofings. If a really ring-tail rouser of a hail storm hits, particularly after a warm afternoon when they so often come, hail can hit hard enough to riddle your roof! It may not show up at once but the damage gets done.

Hail damage is uncommon if you roof your cabin with standard wooden shingles or shooks. You have a nice feeling of fitness in wooden shingles; they supply a long-time covering, too. Shooks, particularly are in harmony with the mountain place. In truth, however, few vacation cabins of today get such a good topping. Shingles are durable. I have lived under "royal" shingles, which are the big, 24-inch cedar shingles of some years back, that had been exposed to all seasons and types of weather for a quarter of a century, and they were doing a job in the last five years of that stretch as good as any roofing.

The cost, the additional labor in laying real shingles, in some cases the fact that a high-grade composition roofing, with mineral facing, is more fire resistant, could have decided the cabin builder not to use

shingles of wood. Actually, I've always wanted to get myself one of those knife-edged splitting gadgets called a "fro" that you hammer through a straight grained cut from a log to whack out shakes, and make my own cabin roof of that wonderfully attractive home-made "shingle." I just never got to it; the composition roofing was so reasonable in cost, so readily laid.

Probably, if it comes to a showdown, you'll want shingles or shakes, but will buy composition roofing.

There are two other roof coverings; one a most modern one, the other distinctly a pioneer type.

The most modern one is the sheet metal roofing. We've had corrugated iron for a long time; it's darned good roofing from a functional standpoint. Now we have sheet aluminum. Generally you have to back the latter; the corrugated iron supplies a good share of its own support.

The other roof is one of boards, usually native lumber when it is readily available as it was when local sawmills came into pioneer settlements. Boards are laid edge-to-edge from eave to ridge pole. Then narrower boards, cleats, are nailed over the cracks between boards. This roof is stout; and if on a fairly stiff slope, it sheds snow and does a fairly good job with driving rain. You can make doubly certain about the rain if you calk the cracks between boards of the first layer before nailing on the cleats. After a time cleats tend to warp, the edges pull away a little from the boards below, and that, without the calking, can let a lusty rain with high wind behind it, get blown in under the cleats and drip through the cracks of the lower layer of lumber.

There are details of using plenty of roofing nails and tar cement where edges of roofing may be "tender," putting a double layer of patent roofing lengthwise over the ridge where weather wear may be excessive on a single layer, and modern plywood used as sheathing under composition shingles or rolled roofing or sheet aluminum. But these general suggestions I've made can guide you to getting a better, weather-tight roof on that cabin. An inadequate or "tender" roof can be an aggravation and it certainly can lead to damage if it lets water leak through to rooms below.

## Reading About Conservation

(From page 4)

pose of Fertilizing Forest Lands, (4) Kind of Fertilizer Required, (5) Economic Results of Afforestation and (6) Properties and Use of Solid Fertilizers in Forestry.

The report is concise, amply supplied with easily understood tables and illustrations that make it an exceedingly well-suited primer for those wishing to apply fertilizers to their growing trees.

*Trail Blazers*, by Coert duBois, published by Stonington Publishing Company, Stonington, Connecticut, price \$3.75.

A timely contribution to the history of the national forests has been supplied by a book just published entitled "Trail Blazers." Its author is Coert duBois, one of the few still living members of a small group of young men who around the turn of the century pioneered the field work of public forestry in the United States. Much has been written about the political leadership of Teddy Roosevelt and Gifford Pinchot in making possible the setting aside as national forests millions of acres of

public timberland in the West. All too meager, however, has been knowledge and recognition of the contribution of the small crew of field men who were scouting the western mountains and supplying Roosevelt and Pinchot with information as to the location of areas of public timberland justifying withdrawal as national forests. This was information essential to Presidential and Congressional action in legislative designation of forest boundaries. For example, it was on the basis of such information that in 1907 President Theodore Roosevelt was able with one stroke of his pen to create 16,000,000 acres of national forests just before Congress took away from him the power to do so.

In those formative days of the national forest system, boundary work as it was called was of top importance and required picked men who were good woodsmen, self-reliant, and capable of working often alone in unsurveyed and unknown wilderness country. By recounting his own experience from 1900 when he joined the old Bureau of Forestry at

\$25.00 a month until he entered World War I, Mr. duBois has opened a vista of national forest development that makes both enlightening and exciting reading.

Ovid Butler

*Using Wayside Plants*, written and published by Nelson Coon, Watertown, Mass., price \$3.00.

This book was written for the modern motorist who wants to learn to enjoy the bounties of nature which are so easily found a short distance from urban centers. It concerns 100 edible and useful plants in the northeastern part of the United States; and one chapter is devoted to 100 recipes whereby these plants may be converted into tasty dishes. Ninety maps and 170 drawings will appeal to nature enthusiasts. The book is especially recommended for Scouters, and as a source book for librarians. Also, the book is of handy size and will fit in the glove department of your automobile. Mr. Coon is widely-known in horticulture circles and is presently librarian for the Perkins School for the Blind.

## Forest Forum

(From page 2)

have to await the full report of the management specialists on these questions.)

### Forestry as a Career

EDITOR:

The March issue of AMERICAN FORESTS on forestry as a career is one of the finest I have received since I became a member. The brightness of the whole issue from cover to cover and the intense belief in the future of this great profession is what appeals to me especially. My own pet interest is organized camping, and in the past I have not been able to sift out pertinent information as regards forestry as a career until your "terrific" March issue came along. In the past, I have discovered that practically all the guidance counselors in the local high schools are sadly lacking in knowledge about this type of career. In my judgment, The American Forestry Association will be derelict in its duty if it fails to put a copy of this issue into the hands of guidance counselors everywhere. Can't we do something about this? Could you come to one of our meetings of the National Camping Association and explore this with us?

Waldo E. Stone  
48 Boylston Street  
Boston 16, Mass.

(Editor's Note—We need all the help we can get on this and we certainly appreciate Mr. Stone's letter. Budget limitations are our big hurdle here. Unless we have outside support, a limited number of copies

of our March issue will soon be exhausted. While we are encouraged by the number of schools that are already making use of this issue, especially in Chicago, we know that this effort represents only a drop in the bucket compared to the entire reservoir of high school juniors and seniors. Our thought is that our young people should have the benefit of making an informed choice on this matter of a career and obviously they cannot make such a choice when they do not even see lively material on the great advantages of forestry as a career. We would certainly be most happy to explore this further with the National Camping Association and other interested groups that have written to us regarding this issue.)

EDITOR:

We are very much taken with the March 1957 number of AMERICAN FORESTS. I am writing to inquire whether you have additional copies of these which are available for general distribution.

I should like to tell you how much I think this publication can mean to forestry education in the United States, and we are pleased that you have seen fit to use several of the photographs which we provided for this number. Particularly do we feel honored that the photo on the cover is from our campus.

George B. Hartman  
Head, Department of Forestry  
Iowa State College

EDITOR:

I wish you would send 20 copies of your March issue to Mr. Willis E. Rambo, Montesano Public Schools, Montesano, Washington. I think this was a magnificent issue, long needed, practical and helpful.

Chapin Collins  
Editor, the *Vidette*  
Montesano, Wash.

(Note — Editor Collins is widely-known to all people in forestry as the principal originator of the Tree Farm idea. In fact, the idea was hatched in his newspaper office and the Clemons Tree Farm in his county was the first in the United States.)

EDITOR:

I too consider Richard W. Behan's "The Big Step" a prize winning article, in your March issue of AMERICAN FORESTS. I am particularly interested in this phase of fire suppression because my son has also been a smoke jumper. However, I did not appreciate the use of absolutely unnecessary profanity. It added neither interest, emphasis, nor value.

If an old hardened forester finds this offensive, how much more so may it not be to the many ladies who read your fine magazine.

It may be well to point out to our budding foresters that profanity is not appreciated by all. I think you should have exercised your prerogative and deleted it from the story.

C. J. Krueger  
Salem, Oregon



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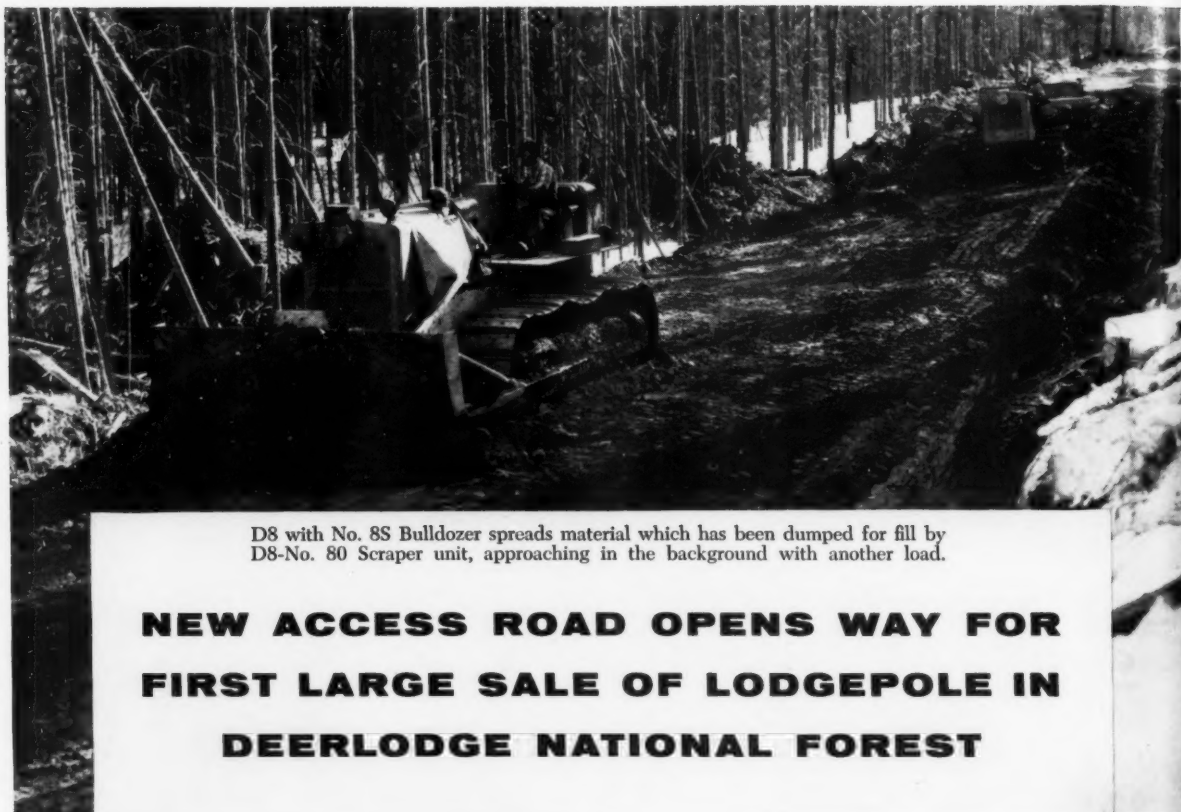
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D8 with No. 8S Bulldozer spreads material which has been dumped for fill by D8-No. 80 Scraper unit, approaching in the background with another load.

## NEW ACCESS ROAD OPENS WAY FOR FIRST LARGE SALE OF LODGEPOLE IN DEERLODGE NATIONAL FOREST

On January 15, last year, Naranche & Konda Construction Co. started building 7.4 miles of timber access road for the U. S. Forest Service in the Philipsburg Ranger District, Deerlodge National Forest, Montana. This Butte contractor had been awarded the job with a bid of \$110,000. The job involved clearing timber, grading, graveling and drainage for a 14-foot-wide road to EE14 specifications. Earthmoving yardage totaled about 90,000. The job, completed in midsummer, cleared the way to reach large stands of lodgepole timber in the Green Canyon area. The first sale, held in May last year, was for 20,000,000 bd. ft.

Mainstays of production for Naranche & Konda on this job were two CAT\* D8 Tractors and a No. 12 Motor Grader. The new D8 was equipped with a No. 8S Bull-

dozer, while its older brother was matched with a No. 80 Scraper. Materials handled were dirt and rock, with the older unit hauling and the new one doing such chores as push loading, installing a steel culvert pipe and spreading the material dumped on the fill. The units worked 8 hours a day, 6 days a week, with a minimum of down time. Operator Edward A. Nelson made this comment on the new D8's performance: "The torque converter is good for pushing. It gives steady power. It's good for 'dozing, too."

Torque converter or direct drive, you get your choice in the modern heavy-duty D8. This rugged machine packs 191 HP (flywheel) and is built to do more work with less down time at lower cost than any other unit in its power range. See your Caterpillar Dealer for proof of performance. Better still, name the date—he'll demonstrate!

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